DOCUMENT RESUME

ED 329 733 CE 057 215

AUTHOR Lynch, Richard L.
TITLE A National Database on Vocational Teacher Education.
INSTITUTION National Center for Research in Vocational Education, Berkeley, CA.
SPONS AGENCY Office of Vocational and Adult Education (ED), Washington, DC.
PUB DATE Dec 90
CONTRACT V051A80004-89
NOTE 166p.
AVAILABLE FROM National Center for Research in Vocational Education, Materials Distribution Service, Horrabin Hall 46, Western Illinois University, Macomb, IL 61455 (order no. MDS-121: $10.50).
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Administrative Organization; Admission Criteria; *Databases; Educational Change; Enrollment; *Graduation Requirements; Higher Education; Institutional Characteristics; *National Surveys; *Teacher Education Programs; *Teacher Educators; *Vocational Education

ABSTRACT

This report contains data and related information about preservice vocational teacher education programs as offered at U.S. colleges and universities. Data presented are about the institutional and administrative milieu in which vocational education takes place, the professors, curriculum, and instructional parameters. Discussion is also included of possible effects of educational reform upon vocational teacher education. Two survey instruments were used to collect data: an Institutional Questionnaire and a National Survey of Professors of Vocational Education. These questionnaires solicited data on the following categories: (1) institutional characteristics; (2) teacher education program characteristics; (3) student admission and exit requirements; (4) educational reform measures; and (5) teacher educators' demographic characteristics, professional preparation, occupational and educational experience, professional activities, plans in higher education, and course load. Responses were provided by 78 colleges and universities (of 109 surveyed) and obtained from 633 teacher educators. Data about the milieu for vocational teacher education are compiled into three broad categories: institutional characteristics, administrative characteristics, and faculty and student census by program area. Thirty-two tables, 45 figures, 16 references, and 2 appendices (a matrix of colleges with vocational teacher education programs and a list of institutional respondents) are included in this report. (NLA)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED329733

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

P. Seidner

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

A NATIONAL DATABASE ON VOCATIONAL TEACHER EDUCATION

Richard L. Lynch

Virginia Polytechnic Institute and State University

National Center for Research in Vocational Education
University of California, Berkeley
1995 University Avenue, Suite 375
Berkeley, CA 94704

Supported by
The Office of Vocational and Adult Education,
U.S. Department of Education

December, 1990

MDS-121

CE057215

BEST COPY AVAILABLE

FUNDING INFORMATION

Project Title:	National Center for Research in Vocational Education
Grant Number:	V051A80004-89
Act under which Funds Administered:	Carl D. Perkins Vocational Education Act P.L. 98-524
Source of Grant:	Office of Vocational and Adult Education U.S. Department of Education Washington, DC 20202
Grantee:	The Regents of the University of California National Center for Research in Vocational Education 1995 University Avenue, Suite 375 Berkeley, CA 94704
Director:	Charles S. Benson
Percent of Total Grant Financed by Federal Money:	100%
Dollar Amount of Federal Funds for Grant:	$5,744,000
Disclaimer:	This publication was prepared pursuant to a grant with the Office of Vocational and Adult Education, U.S. Department of Education. Grantees undertaking such projects under government sponsorship are encouraged to express freely their judgement in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official U.S. Department of Education position or policy.
Discrimination:	Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance." Title IX of the Education Amendments of 1972 states: "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal financial assistance." Therefore, the National Center for Research in Vocational Education project, like every program or activity receiving financial assistance from the U.S. Department of Education, must be operated in compliance with these laws.

TABLE OF CONTENTS

Foreword i

Introduction 1

Method 3
- Instrumentation 3
  - Population 4
  - Data Collection 6
  - Data Analysis 7

Vocational Teacher Education Milieu 8
- Institutional Characteristics 8
- Administrative Characteristics 15
- Faculty and Student Census by Vocational Program Area 23

Vocational Education Professoriate 29
- Demographics 29
- Occupational Experience 47
- Education Experience 48
- Academic Productivity 63
- Future Plans 64

Curriculum and Instruction 79
- Delivery Models 79
- Admission Requirements 80
- Curriculum Parameters 129
- Methods 136
- Exit Requirements 141

Reform 142
- Theme 1—Increases and/or Modifications in Requirements by the Institutions 142
- Theme 2—State Policy and Certification Changes 190

TABLE OF CONTENTS
(continued)

Theme 3—Elimination of Programs/Degrees 191
Theme 4—Student Concerns/Issues 191

Summary 192

Discussion 196
The Environment of Vocational Teacher Education 196
The Vocational Teacher Education Professoriate 198
Vocational Teacher Education Curriculum and Instruction Within a Context of Educational Reform 199

References 201

Appendices 203
Appendix A. Colleges and Universities with Vocational Teacher Education Programs 203
Appendix B. Response to Surveys from Colleges and Universities and Vocational Education Faculty 223

FOREWORD

This report contains data and related information about vocational teacher education as offered at our nation's colleges and universities. The results of this descriptive study are intended to overcome the present lack of knowledge about where, when, what, how, to whom, and by whom vocational teacher education is provided.

Data and information presented in this monograph are primarily about the institutional and administrative milieu in which vocational teacher education takes place, the professors of vocational teacher education, and salient curriculum and instructional parameters. There is also some discussion of possible effects of education reform in this country upon vocational teacher education.

Many people have contributed to the development of this database, its analysis, and publication. Of special note are Lillie Anderton and James Smith, Graduate Research Assistants on the project, both of whom were so instrumental to the success of the data gathering and analysis efforts; Herman Weller who directed the computer input, programming, and printing of the data; Margaret Kirby who assisted with the preparation of the report; and Eileen Keeney whose able administrative assistance and word processing skills were so instrumental in publishing this monograph.

The author also appreciates the assistance of several persons who reviewed the two survey instruments and provided advice on their format and on the processes to be used in gathering the data: Mildred Griggs, University of Illinois-Champaign; James Burrow and Edgar Farmer, North Carolina State University; and Marion Asche, Betty Heath-Camp, Rosary Lalik, Daisy Stewart, and Jeffrey Stewart, Virginia Polytechnic Institute and State University. William V. Wittich of California State University at Long Beach and Charles Losh of the Arizona Department of Education provided excellent reviews of the draft manuscript. Additionally, two undergraduate students of the author, William Broyles and Terry Ambrose, provided much assistance with various aspects of the project.

Finally, the author acknowledges gratefully the research representatives who coordinated the collecting of data from their respective colleges and universities. This was often an enormous task, especially in the many institutions where the faculty and programs are administered in various colleges and departments.

INTRODUCTION

Criticism of American education in the 1980s has been severe. Besides *A Nation At Risk*, over thirty major reports have focused on the poor performance of students and the quality of schools, curricula, and teachers. Although teacher education programs were often implicitly or explicitly held accountable for many of the perceived failures of public education, the early education reports focused primarily on reform of the curriculum for elementary and high school students.

In 1986, however, with the release of reports from the Holmes Group and the Carnegie Forum on Education and the Economy, a shift in the quest for excellence became evident. These teacher education reform reports helped to provide the impetus which resulted in significant changes in teacher education and state-required certification beginning in the mid-1980s. Various surveys and data sets indicate that the states initiated over one thousand pieces of legislative action to reform teacher education and certification policies (Darling-Hammond & Berry, 1988; Kluender, 1984; Sandefur, 1986).

Teacher education seemingly has moved to the center stage of the educational reform movement based on the grounds that school improvement must begin with the upgrading of teacher quality. This "second wave" of reform has focused primarily on relatively quantifiable measures; for example, teacher test scores, subject-matter credit or degree requirements, hours or weeks of required clinical experiences, and so forth (Lynch & Griggs, 1989).

Unfortunately, few of the reform mandates seem to be based on any substantive body of research or knowledge base. In fact, little research has been conducted on teacher education. Lanier and Little (1986) stated, "research on teaching teachers stands in stark contrast to research on teaching youngsters." This seems surprising in that teacher education programs comprise a relatively large percentage of enrollments at over seventy percent of our nation's colleges and universities. Over twelve hundred institutions of higher education engage in teacher education, and both undergraduate and graduate programs in education units serve substantial percentages of these institutions' students. For example, twelve percent of the full-time undergraduate enrollment at baccalaureate-level institutions and thirty-three percent of the graduate enrollment at master's level institutions are in education. At doctoral-level institutions, eight percent of the full-time undergraduate,

fourteen percent of the full-time graduate, and twenty-six percent of the part-time graduate students are in education units (American Association of Colleges for Teacher Education, 1987). Furthermore, most teachers are trained in public, graduate-level institutions of which seventy-three percent are accredited by NCATE (Kluender, 1984). Thus, it would appear logical that research about teacher education would be strongly emphasized because of the large numbers of students involved and the apparent commitment to teacher education from research-oriented colleges and universities.

Numerous explanations have been postulated for the dearth of research in teacher education, including the difficulty in defining a teacher educator and the teacher education population (Ashburn, Mann, Barrett, & Schneiderman, 1988). It has also been cited that research in teacher education is less salient than other lines of education inquiry or that it has been—and may always be—an ancillary (i.e., relatively unimportant) activity (Lanier & Little, 1986; Troyer, 1986; Lynch, 1988). Troyer (1986) even went so far as to say, "perhaps we fear that common criticisms of teacher educators will be substantiated, or that additional criticisms will be forthcoming as a result of new findings" (p. 6). Perhaps a more plausible explanation is that teacher education hasn't had to produce research about its philosophy or mission, curricula, students, professors, standards, methods, and so forth—in effect, measures of its effectiveness—until so demanded by or implied through the education reform reports.

While the body of research on teacher education in general tends to be limited, research and data on vocational teacher education seem to be practically nonexistent. Even the recent research efforts initiated to gain a better understanding of teacher education and teacher educators have not included or have failed to segment data specific to vocational teacher education. Without good data, there is not good information on which to base policy and teacher education reform decisions.

Thus, the primary purpose of this study was to provide baseline data on preservice vocational teacher education programs. Data was gathered across the same dimensions from many colleges and universities which offer vocational teacher education. The results of this descriptive study presented herein are intended to overcome the present lack of knowledge about where, when, what, how, to whom, and by whom vocational teacher education is provided. The data provides information which should help better inform and guide the providers and pertinent decision makers on improving vocational teacher

education within a context of education reform. The data should also be used as a basis from which to launch more specific and informed studies of teaching and teacher education in vocational education.

METHOD

Objectives for collecting the data were drawn from contemporary literature, citing the need for accurate, reliable information on which to base reform in vocational teacher education. The most perplexing problem initially was deciding which data was most important to obtain. As discussed by Yarger (1989), balancing a desire to know a great deal about teacher education with a recognition that respondent burden can seriously affect the completeness and quality of the data force data gatherers to make many very difficult choices.

The conceptual frameworks and instruments from the American Association of Colleges of Teacher Education's study (1985), *Research About Teacher Education* (RATE); John Goodlad's (1990) survey instrument, "Study of the Education of Educators," and the Center for Education Statistics' (1988) *Schools and Staffing Survey* were reviewed for relevance and adaptability for purposes of this study. Personal or telephone discussions were conducted with researchers on each of these projects to help further conceptualize the instruments and data gathering system for the vocational teacher education study reported herein.

Instrumentation

Two survey instruments were used to collect data: an Institutional Questionnaire and a National Survey of Professors of Vocational Teacher Education. A draft of the instruments was developed for review and input from advisors to the project. Improvements and adjustments were made in the substance and format of the instruments as a result of the review.

The Institutional Questionnaire solicited data in three broad categories: institutional characteristics, vocational teacher education program characteristics, and student admission

and exit requirements. A final open-ended question was included to obtain some initial perspective of any education reform measures now taking place in vocational teacher education at that institution. The National Survey of Professors of Vocational Teacher Education instrument contained items pertaining to the teacher educators' demographic characteristics, professional preparation, occupational experience, education experience, time spent on professional activities, future plans in higher education, and undergraduate and graduate courseload. In an open-ended question, professors were asked to describe any important, recent changes in vocational teacher education at their college or university emanating from education reform movements.

Population

There is not a published, comprehensive listing of all vocational teacher education programs and faculty at colleges and universities in this country. However, directories are published for specific program areas by government personnel or professional organizations. The project staff reviewed the following directories to create a comprehensive listing of all vocational and technical teacher education programs in this country: (1) Directory of Teacher Educators in Agriculture, 1988-1989, compiled by David C. Whaley, California State Polytechnic University, Pomona; (2) Directory of National Association of Business Teacher Education Member Colleges and Universities, *Business Education Forum*, December 1988; (3) Directory of Teacher Educators with Supervisory Responsibility for Health Occupations Education programs, compiled by Catherine B. Junge, U.S. Department of Education, December 1988; (4) 1988 National Directory of the Home Economics Division of The American Vocational Association—Institutions, Degree Data, and Personnel, compiled by Susan F. Weis and Dorothy Pomraning; (5) Teacher Education Personnel for Marketing Education, compiled by Edwin L. Nelson, U.S. Department of Education, October 1988; (6) Vocational Special Needs Teacher Education Directory, 1987; and (7) Industrial Teacher Education Directory—Institutions, Degree Data, and Personnel, 1988-89, edited by Ervin A. Dennis for the Council on Technology Teacher Education and the National Association of Industrial and Technical Teacher Educators.

Information commingled from these various directories yielded a total of four hundred and thirty-two colleges or universities purporting to offer one or more preservice vocational teacher education programs. All U.S. colleges and universities purporting to

have at least one vocational teacher education program are listed by state and vocational subject area in Appendix A. All fifty states, The District of Columbia, Guam (at the Guam Community College), and Puerto Rico offer at least one college or university vocational teacher education program.

According to information gleaned from these directories and presented in Appendix A, there were ninety programs in agricultural education, two hundred and thirty-seven in business education, thirty-one in health occupations education, two hundred and sixty-seven in home economics education, eighty-nine in marketing education, ninety-nine in vocational special needs, one hundred and seventy-eight in technology education (industrial arts), and one hundred and twenty in trade and industrial education.

An *a priori* decision was made not to attempt to survey all four hundred and thirty-two colleges and universities purporting to have a vocational teacher education program. Rather, those colleges and universities in any of the states that were listed in directories as providing four or more of the seven traditional specialized program areas of vocational education (agricultural education, business education, health occupations education, home economics education, marketing education, technology education [industrial arts], or trade and industrial education) were included in the survey. Institutions were also surveyed if they offered at least three of the traditional vocational subject areas and a program to prepare vocational teachers to work with special populations. Although an arbitrary cut-off point for purposes of this study, the offering of at least four traditional vocational teacher education programs is also one of the requirements for admission into the University Council on Vocational Teacher Education (UCVE) and is considered by the UCVE to be an important criteria in determining a college or university's commitment to vocational teacher education.

A total of one hundred and twelve institutions (highlighted in Appendix A) in forty-three states met this criteria. However, due to a recording error, one hundred and nine colleges and universities comprised the population for this study.*

---

*Note: It was originally recorded that California State Polytechnic Institute at Pomona and California State University at Los Angeles each had only two vocational teacher education programs and that the University of Northern Iowa had three, therefore, rendering them ineligible for this study. Subsequent analysis indicated that the two California schools each had four vocational teacher education programs and that the University of Northern Iowa had five. However, the recording error was discovered too late to collect and analyze data from these three universities.

Data Collection

Several measures were taken to enhance participation and to reduce respondent burden. The project staff reviewed the various national directories of vocational teacher education programs to determine the organizational structure of vocational education programs at each of the one hundred and nine colleges and universities comprising the population for this study. At least one of the directories usually identified a department or division head or a program coordinator for vocational education. If a vocational education unit head was not clearly identifiable from the directories, a project staff member telephoned a vocational teacher educator at the university to identify a contact person who could best coordinate data gathering from that institution for purposes of this study.

An explanation of the project was then mailed to heads of vocational education units at each of the one hundred and nine colleges and universities. The department/unit heads were then telephoned by a research staff member to (1) explain further the purposes for the study, (2) verify or correct information obtained from the various teacher education directories, (3) identify a contact person--or research representative—at that institution who would coordinate data gathering efforts from all administrative units or programs identified with vocational teacher education, and (4) establish additional parameters for data collecting such as timelines, numbers of instruments to mail, who should complete faculty surveys, and so forth.

Administrators at ten colleges and universities indicated that they did not have vocational teacher education programs, that graduate/completer productivity was so low as to render the program practically nonexistent, or that there was not a commitment to vocational teacher education. Thus, these administrators declared their college or university unqualified to participate. In addition, one university was phasing out its vocational teacher education programs. Therefore, ninety-eight institutions were actually mailed the research materials.

The research representatives at each institution were mailed a cover letter, procedures for completing the professors' survey, procedures for completing the institutional questionnaire, coding forms, and information on how to return the materials. They were also asked to have a college or university catalog(s) mailed to the research staff. Faculty responses were returned in sealed envelopes to protect confidentiality.

Researchers at Virginia Tech collected and verified data from responding institutions and vocational education faculty during spring and summer of 1989. Where necessary, research representatives were contacted by telephone and/or college or university catalogs were reviewed to follow up, clarify, or verify data. Usable and timely institutional and faculty data were received from seventy-eight colleges and universities, nearly eighty percent of the ninety-eight colleges and universities declaring their institutions eligible to participate. (See Appendix B for response details.) A total of seven hundred and forty-two faculty responded; six hundred and thirty-three indicated they were involved with preservice professional preparation of vocational education teachers. The data reported herein is, therefore, based on responses provided by seventy-eight colleges and universities and obtained from six hundred and thirty-three vocational education teacher educators.

Data Analysis

Data is reported using measures of central tendency by category or interval. Computer analyses were performed using selected subprograms of the database management program, *dBase III Plus* (1987). Numbers in the tables and figures presented may not add up to one hundred percent due to rounding. Response data often does not total to seventy-eight institutions nor six hundred and thirty-three faculty. Some data was missing from questionnaires and the respondent was either unavailable, unable, or unwilling to provide the missing information. Where appropriate and seemingly important, incomplete data or numbers not totaling to seventy-eight institutions or six hundred and thirty-three faculty are reported.

VOCATIONAL TEACHER EDUCATION MILIEU

Data was collected from colleges and universities that provide (1) four or more of the seven traditional specialized program areas of vocational education or (2) three of the traditional vocational subject areas and a program to prepare vocational teachers to work with special populations. Data about the milieu for vocational teacher education from the seventy-eight responding colleges and universities was compiled into three broad categories: institutional characteristics, administrative characteristics, and faculty and student census by program area.

Institutional Characteristics

The data describing institutional characteristics was organized into three categories: historical tradition of the institution (public, independent, land-grant, church-related, other); total college or university student enrollments; and type of academic credit hour system (semester, quarter, or other) used by the institution. As indicated in Table 1, all of the seventy-eight responding institutions were public state universities or colleges; forty-seven percent were land-grant institutions.

Data about full-time, part-time, and part-time (nondegree) undergraduate and graduate student enrollments is summarized in Table 2. The average student enrollment for all categories for responding institutions was 18,644; of this number, 15,218, eighty-two percent, were undergraduates and 3,426, eighteen percent, were graduate students. However, the range was very large. For example, five institutions reported full-time undergraduate enrollment at less than one thousand; conversely, three institutions reported more than thirty-three thousand full-time undergraduate students.

Eighty-three percent of the colleges and universities responding to the survey use the semester system. Only twelve institutions, fifteen percent, use a quarter system (see Table 3).

Table 1

Types of Colleges and Universities

Type	No.	% of total
Public land grant	37	47
Public non-land grant state university or college	41	53
Independent college or university	0	
Church-related college or university	0	
Other	0	
Total	78	100

Table 2

Enrollments of Colleges and Universities

	Enrollment										
	Full-time			Part-time			Part-time (non degree)				
Students	No. of responding[a] institutions	No. of students	%	No. of responding[a] institutions	No. of students	%	No. of responding[a] institutions	No. of students	%	Total	%
Undergraduate	71	12,031	88	49	2,502	64%	16	685	68	15,218	82
Graduate	57	1,673	12	43	1,428	36%	13	325	32	3,426	18
Total		13,704			3,930			1,010		18,644	

[a]Number of institutions out of 78 that provided data.

Table 3

Academic Credit Hour Systems at Colleges and Universities with Vocational Teacher Education Programs

Type of system	No.	% of total
Semester	65	83
Quarter	12	15
Not reported	1	1
Total	78	100

Administrative Characteristics

Data was collected on the administrative units for vocational teacher education programs. As shown in Table 4, the various programs are administered in at least eight different schools or colleges, but primarily in colleges of education, agriculture, applied science and technology, or business. As noted in Table 4, the names for the colleges vary considerably. The various names of schools or colleges reported by the respondents are indicated in parentheses after the generic name of the college with which they share similar missions and purposes.

With the exceptions of agricultural and home economics education, the majority of vocational teacher education programs are administered in schools or colleges of education. Over fifty percent of agricultural teacher education programs are either administered in colleges of agriculture (forty-seven percent) or jointly with colleges of agriculture and education (eleven percent). Forty-three percent of home economics teacher education programs are administered in a college of education, twenty-two percent in a college of applied science or technology, and twelve percent in a college of home economics.

Teacher education programs in business education (fifty-five percent) and marketing education (sixty-three percent) are generally administered in a school or college of education; however, thirty-one percent of business education programs and twenty-seven percent of marketing education programs are administered in a school or college of business. Teacher education programs in health occupations education (seventy-six percent), vocational special needs (sixty-seven percent), trade and industrial education (sixty-one percent), and technology education (fifty-three percent) are generally administered in education; however, many of these programs—especially in technology education and trade and industrial education—are administered in a school or college of applied science and technology.

The departmental administrative unit for vocational teacher education is even more varied than the school or college in which the various programs are administered. As depicted in Table 5, the departmental unit in which the various teacher education programs are administered were categorized into six broad categories: (1) the program, in effect, is its own department; (2) the program is administered with one other vocational teacher education program; (3) the program is administered as part of a comprehensive vocational

education department; (4) the teacher education program is administered with its related technology or subject matter—usually external to a school or college of education; (5) the program is administered in an education unit, but not one identifiable with vocational education; or (6) programs not elsewhere classified. Examples of the various names given to the departments are included in parentheses in Table 5.

No one departmental administrative structure is clearly prevalent for all programs, although the clustering of teacher education programs into a comprehensive vocational education department is dominant. Agricultural education is the only teacher education program that tends to have its own department, although just about as many agricultural education programs are part of a comprehensive vocational education department. Home economics teacher education programs are administered with their related technology or subject matter (e.g., in family and consumer studies) more than in any other departmental structure category. No administrative structure is dominant for business education and technology education, although more of these programs are administered in a vocational education department than in any other departmental structure category. Health occupations education, marketing education, trade and industrial education, and vocational special needs tend to be administered in comprehensive vocational education departments.

It is interesting to note that almost no health or marketing education programs are their own departments and that the administrative structure for many marketing and technology teacher education programs was difficult to classify. A sizable number of these three teacher education programs (health, marketing, and technology education) tend not to have specific identity; rather, they are "buried" in some other vocational teacher education program. For example, ten marketing education programs were identified as either in business education, office systems, or information management—none of which is descriptive of the subject matter or pedagogy for vocational marketing education. Although representing a much smaller number than the seven traditional vocational teacher education programs, vocational special needs programs were also difficult to classify. They also tended to be a part of some other teacher education program, for example, in technology or trade and industrial education.

Table 4

Schools/Colleges in Which Vocational Teacher Education Programs are Administered

College/School in Which Program is Administered	Ag Ed		Bus Ed		Health		Home Ec		Mk Ed		Tech Ed/IA		T & I		Sp. Needs	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Agriculture (i.e., Agriculture and Life Sciences, Agriculture Sciences, Agriculture Sciences and Technology)	21	47	1	2			4	6			2	3	2	3		
Agriculture and Home Economics	2	4					1	2								
Applied Science and Technology (i.e., Applied Science and Engineering Technology, Basic and Applied Science, Industry and Technology, Business and Applied Science, Business and Technology, Technology, Fine and Applied Arts and Sciences, Agriculture and Applied Science)	5	11	4	7	4	24	14	22	4	10	24	39	20	32	4	33
Business (i.e., Business Administration, Business and Public Administration, Business and Computer Sciences)			18	31					11	27	1	2	1	2		
Education (i.e., Education and Applied Science; Education and Psychology; Education and Human Services; Education, Health, and Human Services; Education and Technology)	12	27	32	55	13	76	27	43	26	63	33	53	38	61	8	67
Engineering											1	2	1	2		

Table 4 (continued)

Schools/Colleges in Which Vocational Teacher Education Programs are Administered

College/School in Which Program is Administered	Ag Ed		Bus Ed		Health		Home Ec		Mk Ed		Tech Ed/IA		T & I		Sp. Needs	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Home Economics (i.e., Family and Consumer Services, Family Life, Family Resources and Human Development, Health and Human Services, Human Ecology)							12	19			1	2				
Professional Studies			2	3			1	2								
Jointly Administered																
· Agriculture and Education	5	11														
· Business and Education			1	2												
· Home Economics and Education							4	6								
Totals	45	100	58	100	17	100	63	100	41	100	62	100	62	100	12	100

Table 5

Departments in Which Vocational Teacher Education Programs are Administered

Department in which program is administered	Ag Ed		Bus Ed		Health		Home Ec		Mk Ed		Tech Ed/IA		T & I		Sp Needs	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Its own specific department (e.g., Agriculture Education, Business Education, Technology Education)	17	40	13	23	2	12	7	12	2	5	9	15	7	11	1	8
Joint department of two specific teacher education programs (e.g., Business and Marketing Education, Industrial and Technology Education)			3	5			1	2	3	7	6	10	7	11		
Vocational Education (e.g., Occupational Education, Practical Arts and Vocational Education, Vocational and Technical Education, Vocational and Business Education, Center for Occupational Studies, Continuing and Vocational Education)	15	35	20	36	11	65	21	36	20	49	21	34	29	48	5	38
Related Technology or Subject Area (e.g., Agriculture Science, Business Administration, Information Sciences, Family and Consumer Science, Industrial Technology)	9	21	11	20	1	6	24	41	3	7	10	16	8	13		
Teacher Education (i.e., Curriculum and Instruction, Education Policy Studies, Education Leadership, Adult and Youth Education, Secondary Education, Educational Psychology)	2	4	6	11			5	7	3	7	4	7	5	8	1	8
Not Elsewhere Classified			3	5	3	18	1	2	10	24	11	18	5	8	6	46
Totals	45	100	58	100	17	100	63	100	41	100	62	100	62	100	12	100

Faculty and Student Census by Vocational Program Area

The number of institutions reporting full-time equivalent (FTE) faculty in each of the vocational program areas and the number of FTEs in each of the vocational teacher education programs are depicted in Table 6. Over two-thirds of the colleges and universities responding to this survey employ full-time equivalent faculty in four vocational teacher-education programs: business, home economics, technology, and trade and industrial education. Less than fifty percent of the institutions employ FTEs in marketing education, health occupations education, and vocational special needs. The largest average number of teacher educators per institution are in agricultural education and technology education. The smallest average FTE per institution is in marketing education and vocational special needs.

It is noted that more colleges and universities purport to administer vocational teacher education programs (see Tables 4 and 5) than employ FTEs for the programs (Table 6). This represents an anomaly in how programs are sometimes designed, administered, and staffed. For example, marketing education may be offered at a college or university, but no FTE faculty time is allocated specifically to it; rather, the faculty in business education (or some other area of vocational or secondary education) provide the pedagogy for marketing education students. Also, there appears to be a few universities that are offering a generic degree in vocational education and at which faculty provide pedagogy to all students planning to teach in any of the traditional vocational education subject areas. Thus, for example, faculty at these institutions teach preservice general vocational education methods or curriculum classes to students; rather than specific courses in how to teach such subjects as agriculture, home economics, or technology education.

Student census data was collected by program area for completers of the 1987 and 1988 academic years and for anticipated completers for 1989. The average number of yearly graduates from the responding institutions are reported in Table 7, along with the total percentage of change for the three-year period.

Three program areas—agricultural education, home economics education, and technology education—show a declining number of completers in teacher education over the three-year period. Agricultural education leads all program areas in this downward

trend with a 31.4% decline, followed by home economics with a 15.4% decline and technology education with a 6.2% decline.

The preparation of vocational special needs teachers revealed a 14.3% increase between 1987 and 1989. Business education (+6.5%), marketing education (+6.5%), and trade and industrial education (+2.2%) had modest increases in the numbers completing preservice teacher preparation in these areas. A small decline in health occupations education completers in 1988 was offset with a small increase in 1989, thereby maintaining a status quo for that program.

In addition to traditional vocational preservice program offerings, information and data were compiled about completers of atypical teacher preparation areas in a write-in section of the questionnaire titled *Other*. Institutions reported teacher education preservice options such as career occupations, vocational counselor education, general vocational education, nondegree trade and industrial education, and certificate programs not requiring a Bachelor's degree. Enrollments reflect a 15.8% decrease in these programs over the 1987-89 period.

Table 6

Number of Full-time Equivalent Faculty by Vocational Program Area

Vocational program area	Institutions with programs N = 78	% of total	Av. no. of FTEs	Range of FTEs	SD
Agricultural education	41	53	3.35	.85-12.00	2.73
Business education	54	69	2.76	.25-11.00	2.13
Health occupations education	15	19	2.13	1.00-8.00	2.00
Home economics education	59	76	2.01	.25-8.00	1.51
Marketing education	37	47	1.67	.05-8.00	1.59
Technology education/ industrial arts	58	74	3.18	.25-16.00	2.68
Trade and industrial education	58	74	2.76	.10-12.00	2.27
Vocational special needs	11	14	1.59	.50-3.00	1.00

Table 7

Vocational Teachers by Program Area Prepared at Preservice Level
1987-1989

Program Area	1987 Avg. No. of anticipated completers	1987 No. of Institutions	1988 Average No. of completers	1988 No. of Institutions	1989 Average No. of completers	1989 No. of Institutions	1987-89 Percent of total change
Agricultural education	11.48	29	10.33	30	7.88	33	-31.4%
Business education	13.30	44	13.66	44	14.16	45	+6.5
Health occupations education	5.91	11	5.86	5.92	12	+.001	
Home economics education	8.06	49	7.39	49	6.82	49	-15.4
Marketing education	7.68	31	7.97	33	8.18	34	+6.5
Technology education/ industrial arts	10.55	49	10.17	48	9.90	51	-6.2
Trade and industrial education	12.98	43	13.07	43	13.26	42	+2.2
Vocational special needs	7.00	3	7.67	3	8.00	3	+14.3
Others	12.67	6	12.17	6	10.67	6	-15.8
	89.63		88.29		84.79		

Note: Several institutions reported no completions over the 3-year period, although the specific vocational teacher education program continues to be offered. The figures reported for average number of completers are for values greater than zero and are based on the numbers of institutions reporting at least one completer for that year.

BEST COPY AVAILABLE

VOCATIONAL EDUCATION PROFESSORIATE

A total of seven hundred and forty-two college and university faculty members returned the National Survey of Professors of Vocational Teacher Education questionnaire. Of this total number of responses, six hundred and thirty-three reported they were involved with the professional preparation of *preservice* vocational education teachers. By survey definition, faculty in preservice vocational teacher education programs typically teach courses such as methods, curriculum, foundations, philosophy, lab management or cooperative education, and/or supervise student teachers. Preservice vocational teacher education was defined as any program designed to prepare students for first-time teaching and/or initial licensing in a vocational education subject. Typically, preservice students are in undergraduate programs; however, some may already have an earned baccalaureate degree, some may have taught other subjects, and some may have the equivalent of college-level preparation acquired through work experience. The common factor in a preservice teacher education program for purposes of this study is that all students enrolled are preparing to begin to teach in a vocational education subject at the secondary, postsecondary, or adult level. Of the seven hundred and forty-two respondents, one hundred and nine faculty members indicated they did not teach in a preservice teacher education program. Therefore, the data reported herein is based upon six hundred and thirty-three responses.

Demographics

The vocational teacher education professoriate is approximately seventy-one percent male and twenty-nine percent female. The average age is about forty-nine-years old with a range from twenty-five- to sixty-nine-years of age. The faculty are predominantly white (ninety-one percent); with a small number of Blacks (5.5% of the total), and other minorities (about 3.5% of the total). Table 8 summarizes these data by gender and ethnicity.

Of the six hundred and thirty who indicated their faculty status, two hundred and thirty-nine (thirty-eight percent) are professors; one hundred and eighty-eight (thirty percent) are associate professors, one hundred and forty (twenty-two percent) are assistant professors, and fifty-four (nine percent) are instructors or lecturers. An additional nine

persons (one percent) indicated "other," and then provided a variety of titles such as visiting instructor, adjunct, research associate, and field resource associate. Data for rank and gender is provided in Table 9, and for rank and race in Table 10. It should be noted that six hundred and thirty respondents provided their professorial status; six hundred and twenty-eight provided gender. Nearly all (six hundred and twenty or ninety-eight percent) are employed full-time; only eleven (two percent) are employed part-time.

Over sixty-eight percent (n = 431) of the vocational teacher educators—regardless of professorial rank—are tenured. Eighteen percent (n = 115) are nontenured, but on a tenure line. Seven percent (n = 47) are nontenured, but consider themselves "reasonably" secure. Six percent (n = 37) are ineligible for tenure (i.e., on restricted contracts). This data is reported in Table 11.

The average nine-month equivalent salary for full-time vocational teacher educators—regardless of professorial rank—in the Spring of 1989 was $35,745. This is based on salary figures provided by five hundred and forty-two full-time faculty, converted to a nine-month base for those holding ten-, eleven-, and twelve-month appointments. The nine-month equivalent salary ranges were from a low of $11,700 to a high of $67,700. There are three hundred and twenty-six faculty members employed on a nine-month basis and one hundred and ninety-seven on a twelve-month base. In addition, four respondents indicated they were employed for eight months, forty for ten months, and ten for eleven months. Forty-three did not report any salary information, and seventy-two did not provide a specific salary figure. In Table 12, nine-month actual or equivalent salary figures are reported by rank and gender. In Tables 13 and 14, actual reported average salary figures are provided for those on nine- and twelve-month appointments by rank and gender.

Nearly eighty-four percent of the vocational teacher educators have a terminal degree: two hundred and eighty-four have completed a Ph.D., and two hundred and fifty-five have completed an Ed.D. In addition, fourteen percent (n = 85) have completed a master's degree. Four respondents, less than one percent, hold less than a master's degree. This data is reported in Table 15.

Fifteen respondents had completed their highest earned degree in 1988; one person had earned a terminal degree thirty-eight years ago. The average person had completed his

Table 8

Gender, Age, and Ethnicity of Vocational Teacher Educators

Ethnicity	Male			Female		
	No.	% of total	Av. age	No.	% of total	Av. age
White	406	65.0	49.5	165	26.0	46.5
Black	21	3.0	48	14	2.0	49.5
Asian or Pacific Islander	7	1.0	54	2	.3	52.5
American Indian or Alaskan Native	2	.3	45.5	2	.3	40
Hispanic	4	.6	45.5	0	--	--
Other	6	1.0	43	0	--	--
Total	446	70.9		183	28.6	

Note. N = 629.

Table 9

Faculty Rank and Gender of Vocational Teacher Educators

	Male		Female	
	No.	% of total	No.	% of total
Professors	202	32	35	6
Associate professors	135	21	53	8
Assistant professors	81	13	59	9
Instructors, lecturers, or equivalent	25	4	29	5
Other	2		7	1
Total	445	70	183	29

Note. N = 628.

Table 10

Faculty Rank and Race of Vocational Teacher Educators

	Professor (38%)	Associate professor (30%)	Assistant professor (22%)	Instructor (9%)	Other (1%)
Black	7	9	17	3	
Hispanic	0	2	1	1	
Asian or Pacific Islander	0	1	1	2	
American Indian or Alaskan	[illegible]	1	1	2	
White	229	171	119	43	9
Other	2	1	2	1	—
Total	239	188	140	54	9

Note. N = 630.

Table 11

Tenured Status of Vocational Teacher Educators

Status	No.	% of total
Tenured	431	68
Nontenured, but on tenure line	115	18
Nontenured, but "reasonably" secure on continuous appointment	47	7
Ineligible for tenure	37	6
Total	630	99

37

Table 12

Salaries by Rank and Gender for Vocational Teacher Educators (9-month actual or equivalent)

Rank	n	Male	n	Female
Professor	183	$43,030	27	$40,100
Associate Professor	124	36,003	44	35,973
Assistant Professor	69	29,759	53	28,897
Instructor, Lecturer	21	22,718	24	19,986
Other			6	17,736
Average all ranks	397	$37,454	154	$31,044
Average, all ranks, both genders		$35,745		

Table 13

Salaries by Rank and Female Gender for Vocational Teacher Education (9-month and 12-month actual)

Rank	Female			
	No. on 9-month employment	Avg. salary	No. on 12-month employment	Avg. salary
Professor	14	$41,974	9	$54,066
Associate professor	30	37,412	9	43,878
Assistant professor	34	30,006	15	34,666
Instructor, lecturer, equivalent	12	23,821	5	23,400
Other	2	18,750		

Table 14

Salaries by Rank and Male Gender for Vocational Teacher Education (9-month and 12-month actual)

Rank	MALE			
	No. on 9-month employment	Avg. salary	No. on 12-month employment	Avg. salary
Professor	97	$43,858	71	$57,216
Associate professor	69	36,275	44	46,830
Assistant professor	44	30,067	22	38,454
Instructor, lecturer, equivalent	7	21,221	12	20,283

Table 15

Highest Degree Earned by Vocational Teacher Educators

Degree earned	No.	%
Doctor of Philosophy (PhD)	284	45
Doctor of Education (EdD)	255	41
Master's degree (MA, MS, MAT, MBA, CAGS, EdS)	85	14
Baccalaureate degree (BA, BS, BEd)	4	--
Total	628	100

or her highest earned degree nearly fourteen years ago. In Table 16, data on the recency for the highest earned degree of vocational teacher educators are synthesized and reported for five-year intervals.

As depicted in Table 17, twenty universities awarded sixty-five percent of all of the highest degrees earned by respondents to this study. Ohio State University awarded ten percent of all the latest degrees earned by vocational teacher educators. The concentration or major area of study for twenty-three percent of all respondents was identified as either "vocational education," "occupational education," or "comprehensive vocational education." Major areas of concentration for vocational education faculty are reported in Table 18.

Occupational Experience

The literature in vocational education related to vocational teacher preparation and certification often discusses recommendations or requirements for business and industry paid occupational experience. In nearly all states, paid business and industry experience is required for state teacher certification in some vocational education subject areas (e.g., trade and industrial education and marketing education) or specific skill areas within subject areas (e.g., child care within home economics education or cooperative office education within business education). The specific requirements, the inherent occupational assessment or testing, and even the terminology used varies considerably among states and among vocational program areas (Lynch & Griggs, 1989). But if little is known about the occupational experiences of vocational education teachers, even less is known about the occupational experiences of the teachers of vocational teachers. Thus, respondents to this study's professors' survey were asked to list the occupational title for all paid business and industry experience, the approximate number of hours worked in each occupation, and the years in which the work occurred.

Over eighty-one percent (n = 514) of the teacher educators reported they had worked in at least one occupational area for an average of 5,193 hours—or an equivalent of over two and a half years of full-time employment. Nineteen percent (n = 129) did not respond to the question or indicated they had not completed any paid business or industry experience.

Also, sixty-two percent (n = 395) had worked in a second occupational area, averaging 3,983 hours—nearly two years of equivalent full-time employment in this area; forty-one percent (n = 259) worked in three areas, averaging 3,889 hours in the third occupational area; twenty-four percent (n = 152) worked in four areas averaging 3,763 in the fourth occupational area; and twelve percent (n = 73) worked in a fifth occupational area, averaging 3,688 hours in that area. The years for the experience varied considerably ranging from the mid-1930s through 1989.

Education Experience

The full-time faculty responding to this survey had worked in higher education for more than sixteen years, nearly thirteen of which had been completed at the institution in which they were currently employed. The range of experience in higher education was from one to forty-one years. This data is reported in Table 19 by five-year intervals. The numbers of years of experience at their current institution are reported in Table 20 by five-year intervals.

Of the six hundred and twenty full-time vocational teacher educators responding to this study, four hundred and sixty-two (seventy-five percent) have averaged over five and a half years of experience as secondary teachers, two hundred and fifteen (thirty-five percent) as adult teachers, one hundred and fifty-three (twenty-five percent) as postsecondary teachers, one hundred and seventeen (nineteen percent) as middle school teachers, and twenty-four (four percent) as elementary teachers. These figures, along with the average years' experience in each of the positions, are reported in Table 21. In addition, eighty-four respondents (thirteen percent) indicated they had part-time experience as adult education teachers, twelve (two percent) had part-time experience as postsecondary teachers, and ten (two percent) had part-time experiences as middle school teachers.

In addition to teaching experience, one hundred and sixty (twenty-six percent) of the respondents reported an average of six years administrative experience as a department head, sixty-four (ten percent) reported more than four years experience as a state department of education supervisor, and forty-eight (eight percent) reported more than four years as a vocational director. The number and average years of experience as nonuniversity administrators are reported in Table 22.

Table 16

Year Since Receiving Last Degree

Five-year intervals	No.	% of total
1 - 5	92	15
6 - 10	120	20
11 - 15	125	21
16 - 20	162	27
21 - 25	84	14
26 - 30	19	3
31 - 35	5	1
36 - 40	2	
Totals	609	100

Note. M = 13.93. SD = 7.18.

Table 17

Universities Awarding Highest Degree Earned by Vocational Teacher Educators

University	No. of degrees	%
Ohio State University	64	10
Penn State University	36	6
University of Minnesota	33	5
University of Missouri	32	5
Iowa State University	27	4
University of Illinois	26	4
Oklahoma State University	24	4
Virginia Polytechnic Institute and State University	20	3
University of Northern Colorado	15	2
Michigan State University	14	2
Southern Illinois University	13	2
Texas A&M University	13	3
Oregon State University	12	2
University of Georgia	11	2
Indiana University	11	2
University of Tennessee	11	2
Temple University	11	2
Cornell University	10	2
University of Maryland	10	2
Purdue University	10	2

Table 18

Major Area of Study for Highest Degree Earned

Degree earned	No.	%
Vocational Education	145	23
Agricultural Education	86	14
Trade & Industrial Education	63	10
Business Education	62	10
Home Economics Education	48	8
Curriculum	29	5
Technology Education	26	4
Administration	18	3
Secondary Education	14	2
Higher Education	11	2
Adult Education	7	1
Marketing Education	7	1
Research	7	1
Others	107	16

Note. N = 630.

Table 19

Years of Employment in Higher Education

Five year-intervals	No.	% of total
0 - 5	84	14
6 - 10	94	15
11 - 15	101	16
16 - 20	140	23
21 - 25	119	19
26 - 30	51	8
31 - 35	20	3
36 - 40	6	1
41	2	
Total	617	99

NOTE. M = 16.18 SD = 8.50.

Table 20

Years of Employment at Current Institution

Five-year intervals	No.	% of total
0 - 5	166	27
6 - 10	97	16
11 - 15	108	18
16 - 20	126	20
21 - 25	83	13
26 - 30	24	4
31 - 41	13	2
Total	617	100

NOTE. M = 12.93. SD = 8.29.

Table 21

Nonuniversity Teaching Positions Held by Vocational Teacher Educators

Position held	No.	% of Total	Avg. no. of yrs.	Yrs. of experience SD
Secondary teacher	462	75	5.64	4.15
Adult teacher	215	35	5.60	6.21
Postsecondary teacher	153	25	9.05	8.31
Middle School teacher	117	19	3.01	2.50
Elementary teacher	24	4	2.88	2.15
Counselor	26	4	5.37	6.75

NOTE. N = 620.

Table 22

Nonuniversity Administrative Positions Held by Vocational Teacher Educators

Position held	No.	% of total	Avg. no. of yrs.	Yrs. of experience SD
Department chair	160	26	6.06	4.67
State department of education supervisor	64	10	4.2	3.49
Vocational director	48	8	4.20	3.49
Principal/assistant principal	33	5	2.76	2.03
Superintendent/assistant superintendent	11	2	5.55	3.14
Other[a]	66	11	5.49	6.34

NOTE N = 620.

[a]Many positions were identified including dean, coach, consultant, cooperative education coordinator, curriculum specialist, training specialist, research specialist, substitute teacher.

Academic Productivity

Academic life is traditionally divided among teaching, scholarship, and service, areas that were examined in this study. Respondents were asked to indicate (1) the percentage of time they spent in each area, (2) the percentage of time their institution desires they spend in each area, and (3) the percentage of time they feel would be ideal to spend in each area. The results are summarized in Figure 1. Vocational teacher educators spend an average of fifty-eight percent of their time in teaching, eighteen percent in scholarship, and twenty-four percent in service. Their university desires that they spend about fifty-three percent of their time in teaching, twenty-eight percent in scholarship, and nineteen percent in service. The professors would like to spend fifty-three percent of their time in teaching, twenty-six percent in scholarship, and twenty-one percent in service. Thus, faculty spend more time in service and teaching and less on scholarship than either they or their university desire.

It should be noted that there was wide variance on the responses to information requesting time allocation for teaching, research, and service. For example, only three persons reported that they did not teach; however, seventy-three persons responded that they spend no time on scholarship, and thirty-three persons reported no time spent in service. Interesting, too, is the fact that sixty-two respondents indicated that they'd really like to spend *no* time on scholarship; nearly twenty-five percent of the respondents indicated they'd like to spend ten percent or less time in this area of academic life.

During a typical week, faculty reported spending fifty hours on the job. Approximately twenty-seven hours are spent in instruction and clinical supervision, thirteen and a half hours on service, seven and a half hours on scholarship, and two hours on consulting or commercial publications. This data and descriptors for professional activities are provided in Table 23. Again, however, it should be noted that there was considerable variance in the data. For example, only five persons responded no time spent on teaching during a typical week; however one hundred and eighty-two (over thirty percent of those responding to this question) indicated they spent no time on inservice, two hundred and forty-seven (over forty-one percent) reported no time spent on clinical supervision, eighty-nine (fifteen percent) spent no time on research, and two hundred and eighty-nine (forty-seven percent) reported no consulting or commercial publication activity.

The teaching loads for vocational teacher educators for the academic year and for summer school are reported in Table 24 and 25. Over sixty-nine percent of all faculty responding to this survey teach undergraduate vocational pedagogy courses, and forty-nine percent teach undergraduate major or subject-matter courses during the academic year. They average slightly more than three undergraduate pedagogy and four undergraduate subject-matter courses. Nearly forty-nine percent of the respondents teach an average of two graduate pedagogy courses during the academic year. The teaching productivity is considerably less for summer school. It appears as though less than one third of the faculty are involved with summer school teaching.

Future Plans

For the most part, the vocational teacher education faculty appear to be relatively stable for the next five years. As shown in Table 26, seventy-one percent ($\underline{n}$ = 449) expect to continue working as a faculty member at the college or university in which they are currently employed. Only four percent plan to seek a faculty position at another institution, seven percent plan to seek a position in higher education administration, and one percent plan to seek employment in business and industry. Eleven percent ($\underline{n}$ = 67) plan to retire within five years.

The five percent ($\underline{n}$ = 33) responding to "other" did not fit any particular career pattern. A few indicated they would return to work in secondary education, and a few indicated they planned to become consultants. The remaining comments indicated respondents were generally uncertain about their future or were exploring several options.

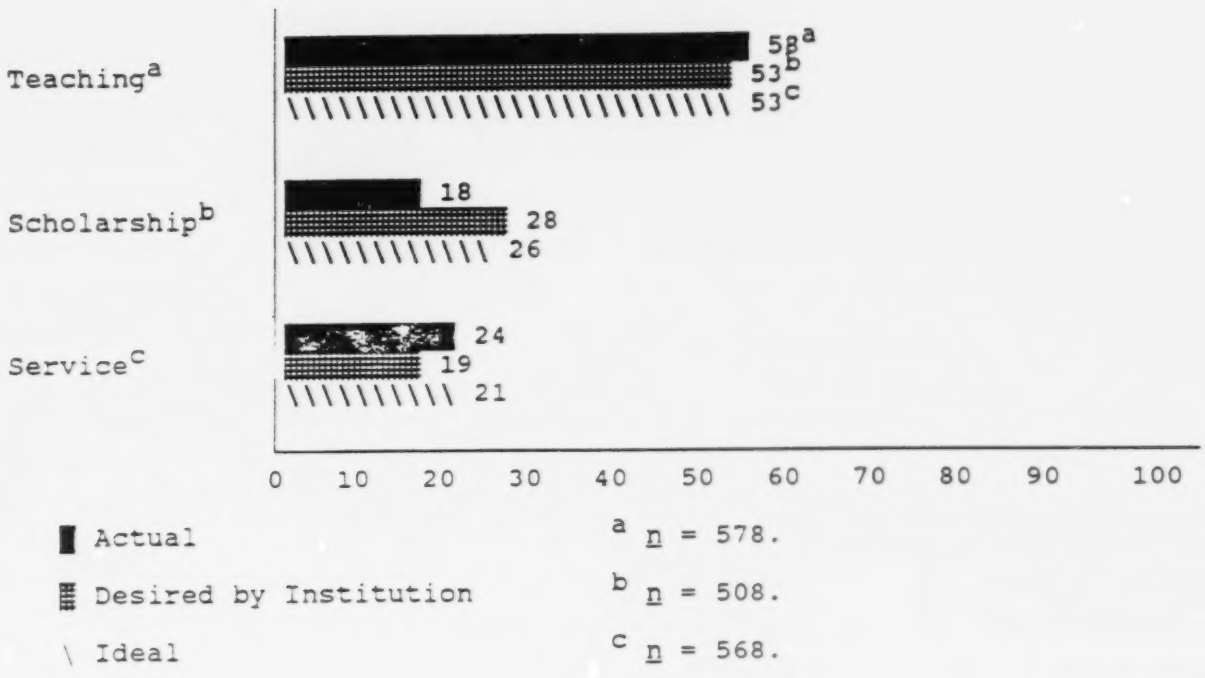

Figure 1. Percentage of time allocation to teaching, scholarship, and service required by vocational teacher education.

Table 23

Hours Per Week Distribution for Vocational Teacher Education

Professional activity	Hours per week
Instruction (preparing for classes, teaching classes, supervising shops or labs, advising students in my office, grading)[a]	23.0
In-service education with teachers on site in public schools, community colleges, or vocational centers (demonstration teaching, workshops, consultation)[b]	4.0
Clinical supervision (on-site supervision of student teachers, occupational experience students, early clinical experiences)[c]	3.9
Scholarship/research/noncommercial writing (conducting research projects, writing for journals, presenting research results at meetings, collaborating on research activities)[d]	7.5
Other service (participating in college or university committees, handling routine administrative tasks and paperwork, advising student groups)[e]	9.4
Consulting/commercial publication (earning supplemental pay for textbook writing, seminars, workshops, service on boards)[f]	2.2
Total	50.0

[a] $N = 596$. [b] $N = 416$. [c] $N = 352$. [d] $N = 509$. [e] $N = 578$. [f] $N = 312$.

Table 24

Teaching Loads for Vocational Teacher Educators: Academic Year

	Academic Year					
	Undergraduate			Graduate		
	No. respond-ing	% of n	Avg. no. of courses	No. respond-ing	% of n	Avg. no. of courses
Vocational pedagogy (graduate or undergraduate courses typically in program-specific or general vocational foundations, curriculum, methods, laboratory or shop management, cooperative education courses)	425	69	3.32	299	49	2.03
Major or subject-matter courses (typically in the subject matter that vocational educators teach, such as in agriculture, business marketing, family and child development, drafting, graphic arts, etc.)	302	49	4.11	123	20	2.26
Clinical supervision (typically in early clinical experiences, student teaching, business- or industry-based supervision)	53	9	2.42	53	9	2.42

Table 24 (continued)

Teaching Loads for Vocational Teacher Educators: Academic Year

	Academic Year					
	Undergraduate			Graduate		
	No. responding	% of n	Avg. no. of courses	No. responding	% of n	Avg. no. of courses
Education courses offered outside of vocational education (typically in educational psychology, research, foundations, philosophy, administration)	57	9	2.23	81	13	1.93
Other (wide listing provided; e.g., computer applications, training and development, office/business administration, statistics, directed/ independent studies)	35	6	2.12	37	6	2.03

Note. N = 613.

Table 25

Teaching Loads for Vocational Teacher Educators: Summer School

	Academic School					
	Undergraduate			Graduate		
	No. responding	% of n	Avg. no. of Courses	No. responding	% of n	Avg. no. of Courses
Vocational pedagogy (graduate or undergraduate courses typically in program specific or general vocational foundations, curriculum, methods, laboratory or shop management, cooperative education courses)	130	21	1.67	220	36	1.66
Major or subject-matter courses (typically in the subject matter that vocational educators teach, such as in agriculture, business, marketing, family and child development, drafting, graphic arts, etc.)	105	17	2.45	109	18	2.00
Clinical supervision (typically in early clinical experiences, student teaching, business- or industry-based supervision)	44	7	1.51	25	4	1.62

Table 25 (continued)

Teaching Loads for Vocational Teacher Educators: Summer School

	Academic School					
	Undergraduate			Graduate		
	No. responding	% of n	Avg. no. of Courses	No. responding	% of n	Avg. no. of Courses
Education courses offered outside of vocational education (typically in educational psychology, research, foundations, philosophy, administration)	21	3	1.43	43	7	1.23
Other (wide listing provided; e.g., computer applications, training and development, office/business administration, statistics, directed/ independent studies)	9	1	2.22	16	3	2.00

Note. N = 613.

Table 26

Future Plans of Vocational Teacher Educators

Personal expectation	No.	% of no.
Remain as a faculty member at present institution	449	71
Seek faculty position at another institution	28	4
Seek position in higher education administration	47	7
Seek position in business and industry	7	1
Retire	67	11
Other (e.g., secondary school system, consulting, undecided, keep options open, business ownership)	33	5
Total	631	99

CURRICULUM AND INSTRUCTION

Several questions on the Institutional Questionnaire were designed to collect information about curriculum and instruction parameters and practices being utilized in vocational teacher education by colleges and universities. Descriptions of and data that were collected about delivery models, admission requirements, curriculum parameters, methods, and exit requirements are presented in this section.

Delivery Models

Six models were identified from the literature as being used to prepare preservice vocational education teachers. Respondents were asked to indicate for each vocational teacher education program the primary preparation or delivery model(s) offered at their institutions. In addition, a category titled *Other* was provided for respondents to describe other delivery models that were not listed that are being used at their institution. Table 27 depicts findings about the primary preservice delivery model(s) for each teacher preparation area.

Nearly all respondents across all teacher preparation areas checked "Baccalaureate degree, majoring in vocational program area" as the primary delivery model for preservice vocational teacher education. In fact, one hundred percent of the agricultural and marketing education programs primarily use this model. Vocational special needs was the only program which did not primarily deliver teacher education through a baccalaureate degree with a major in a vocational education program area.

The second most frequently selected delivery model across all teacher preparation areas (except for health occupations and trade and industrial education) was "Postbaccalaureate program leading toward graduate degree." Two programs—health occupations and trade and industrial education—have as a primary delivery system certification of nonbaccalaureate degree teachers.

In the *Other* category, one responding institution noted that a nonschool-based postbaccalaureate degree program was used; another institution reported an offering of a baccalaureate through a school-based model with an academic major not in education; and

one institution reported a Ph.D. program as a primary delivery model for vocational teacher education.

Admission Requirements

To identify tests and measures that are often used for admission to teacher education programs, data was collected from colleges and universities about prevailing vocational teacher education requirements in the following areas: (1) cumulative grade point average; (2) grade point average in academic major; (3) grade point average in education courses; and (4) the National Teacher's Exam (NTE) (general knowledge, communication, professional knowledge, and area exams). Respondent data is summarized for (1), (2), and (3) by teacher preparation area in Figures 2 through 23. Data is provided only for those categories with a respondent number of five or more.

Overall, a 2.5 grade point average seems to be the required minimum standard score for admission into vocational teacher education. As depicted in these graphs, a 2.5 or higher is generally required across all program areas and for all categories (i.e., cumulative grade point average, courses in academic major, and courses in education). The grading scale basis is 4.0; with A = 4, B = 3, C = 2, and D = 1.

It is interesting to note that eighty percent of responding business education and eighty-one percent of marketing education programs require a 2.5 or higher cumulative grade point average for admission and that very few of these programs permit students with cumulative grade point averages as low as 2.00 (six percent for business education and three percent for marketing education) to be admitted into these respective teacher education programs. Conversely, relatively more technology, health occupations, and trade and industrial programs admit students into teacher education with less than a 2.5 cumulative grade point average.

The minimum cut-off scores required for admission into vocational teacher education on the NTE are presented in Table 28. There were relatively few respondents to this question across all program areas, suggesting that many institutions may not have adopted standard admission requirements for NTE minimum scores in comparison with the adoption of minimum grade point average cut-off scores. Business, home economics, and

Table 27

Primary Delivery Models for Vocational Teacher Education

Delivery Model	Ag Ed N = 41		Bus Ed N = 54		Health N = 15		Home Ec N = 59		Mk Ed N = 37		Tech Ed/IA N = 58		I & I N = 58		Sp Needs N = 11	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Baccalaureate degree, major in a vocational program area	41	100	48	89	13	87	55	93	37	100	49	84	46	79	2	18
Baccalaureate degree, major in subject matter (not in education)	9	22	15	28	2	13	16	27	10	27	16	28	10	17	0	
Baccalaureate degree, double major in subject matter and education	6	15	8	15	1	7	11	19	4	11	10	17	8	14	0	
Postbaccalaureate program leading toward graduate degree	17	41	30	56	10	67	23	39	18	49	26	45	22	38	3	27
Postbaccalaureate nondegree program	7	17	14	26	6	40	11	19	9	24	8	14	14	24	5	45
Certification for non-baccalaureate degree teachers	3	7	6	11	11	73	6	10	4	11	9	16	37	64	0	
Other	1	2	1	2	0		2	3	1	3	2	3	2	3	1	9

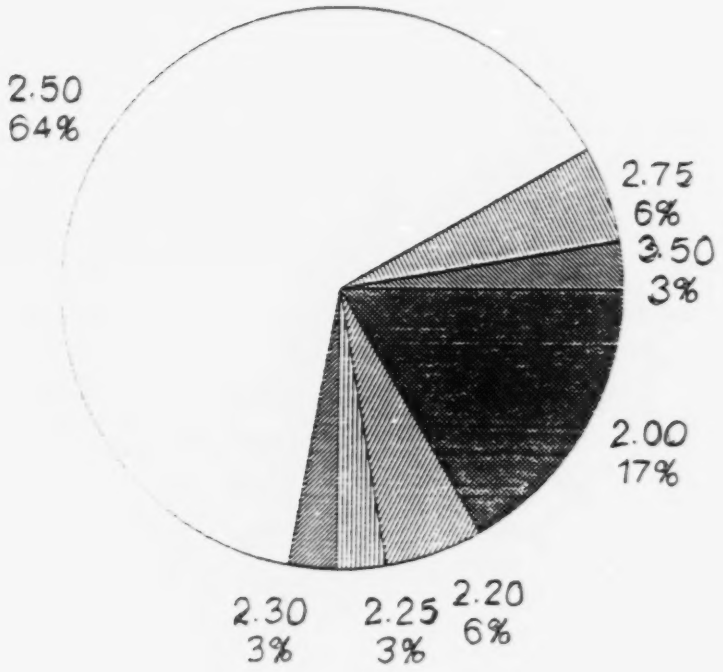

Figure 2. Admission requirements for agricultural teacher education: Cumulative grade point average ($\underline{n}$ = 36; $\underline{M}$ = 2.43).

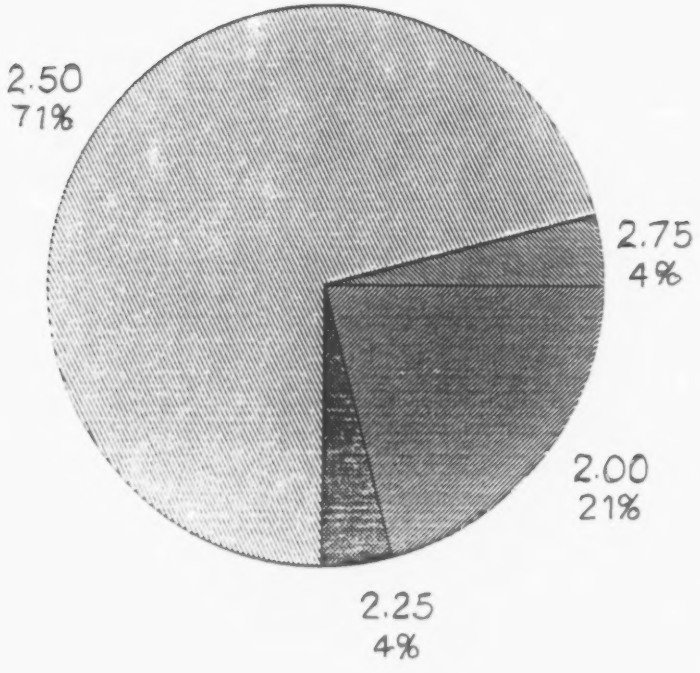

Figure 3. Admission requirements for agricultural teacher education: Grade point average in academic major ($\underline{n} = 24$; $\underline{M} = 2.40$).

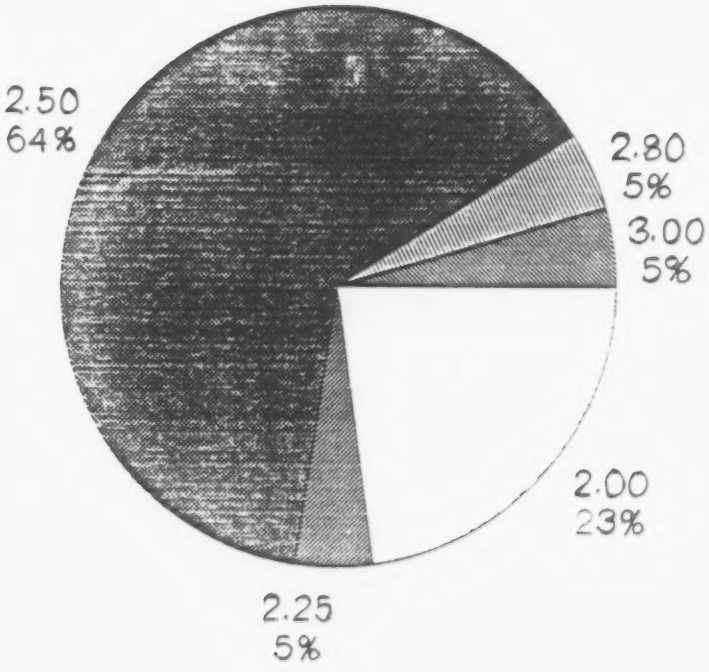

Figure 4. Admission requirements for agricultural teacher education: Grade point average in education courses ($\underline{n} = 22$; $\underline{M} = 2.41$).

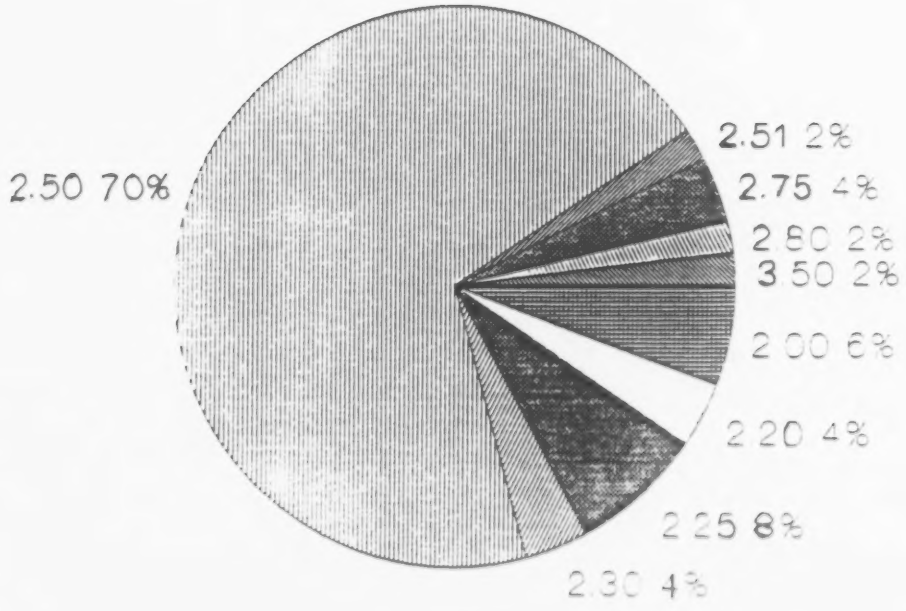

Figure 5. Admission requirements for business teacher education: Cumulative grade point average ($n = 53$; $M = 2.47$).

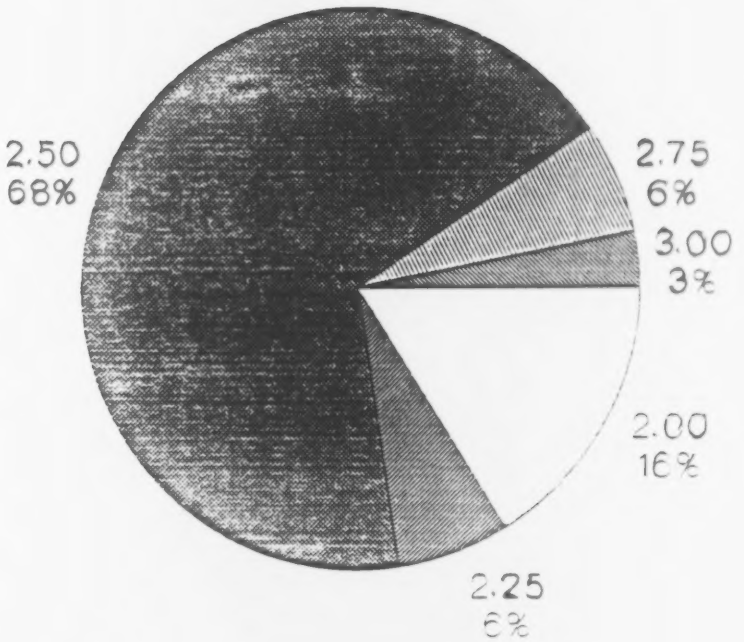

Figure 6. Admission requirements for business teacher education: Grade point average in academic major ($\underline{n}$ = 31; $\underline{M}$ = 2.43).

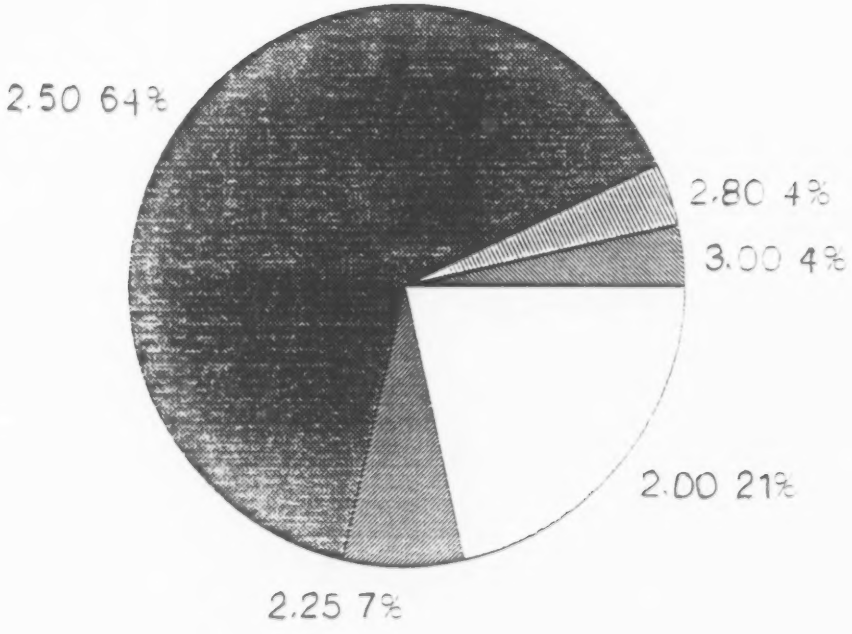

Figure 7. Admission requirements for business teacher education: Grade point average in education courses ($\underline{n}$ = 28; $\underline{M}$ = 2.40).

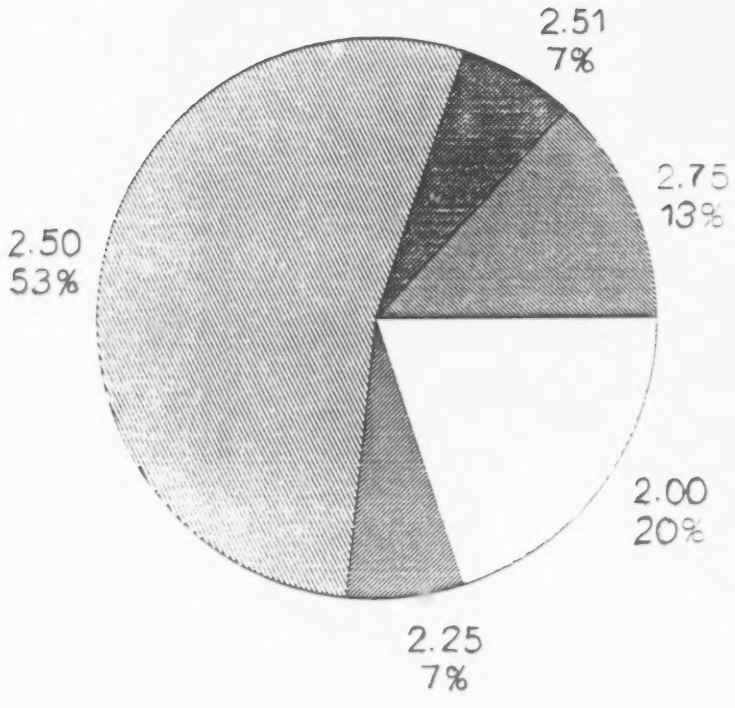

Figure 8. Admission requirements for health occupations teacher education: Cumulative grade point average (n = 15; M = 2.23).

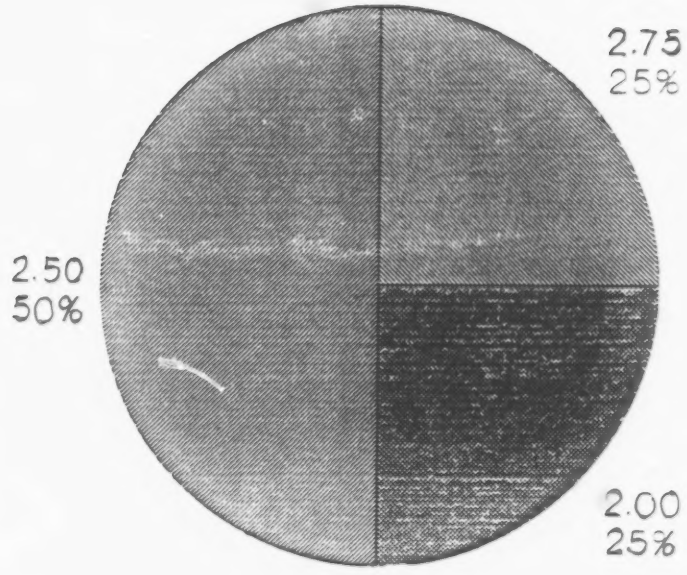

Figure 9. Admission requirements for health occupations teacher education: Grade point average in academic major ($n = 8$; $M = 2.44$).

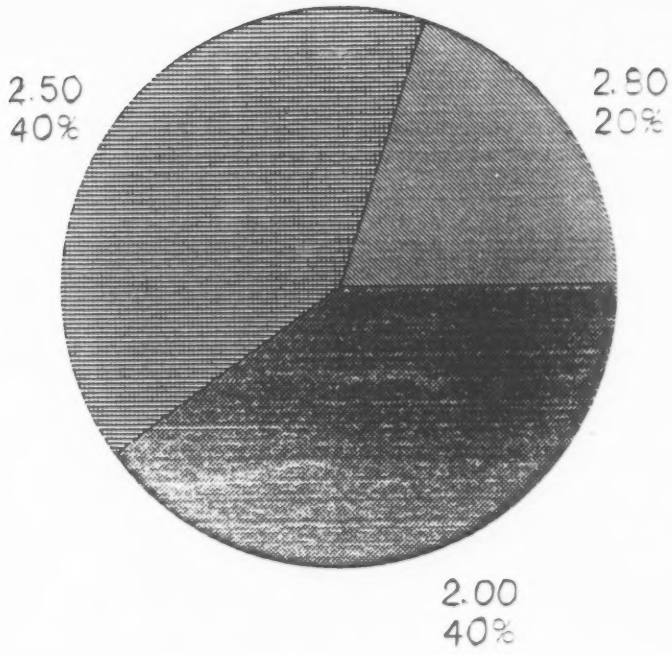

Figure 10. Admission requirements for health occupations teacher education: Grade point average in education courses ($\underline{n} = 5$; $\underline{M} = 2.36$).

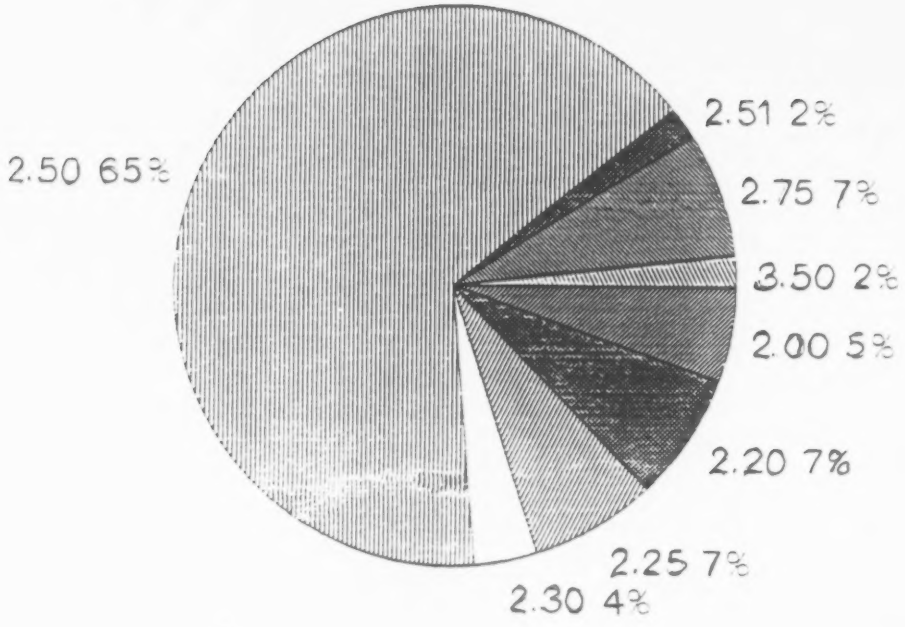

Figure 11. Admission requirements for home economics teacher education: Cumulative grade point average ($\underline{n}$ = 55; $\underline{M}$ = 2.42).

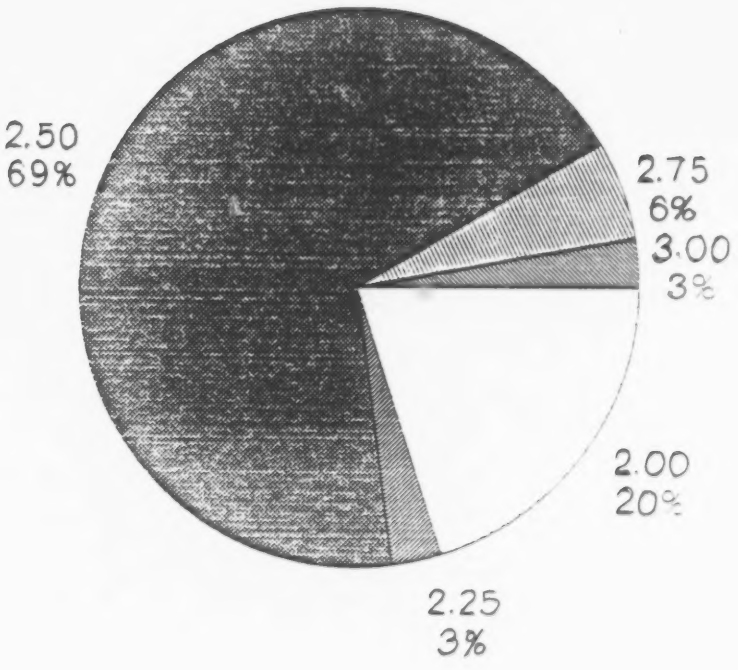

Figure 12. Admission requirements for home economics teacher education: Grade point average in academic major (n = 35; M = 2.42).

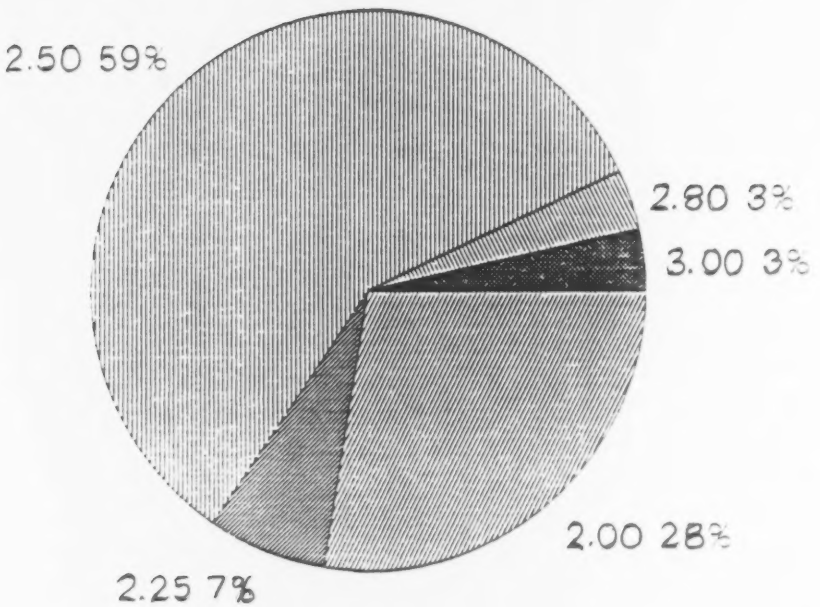

Figure 13. Admission requirements for home economics teacher education: Grade point average in education courses ($n = 29$; $M = 2.37$).

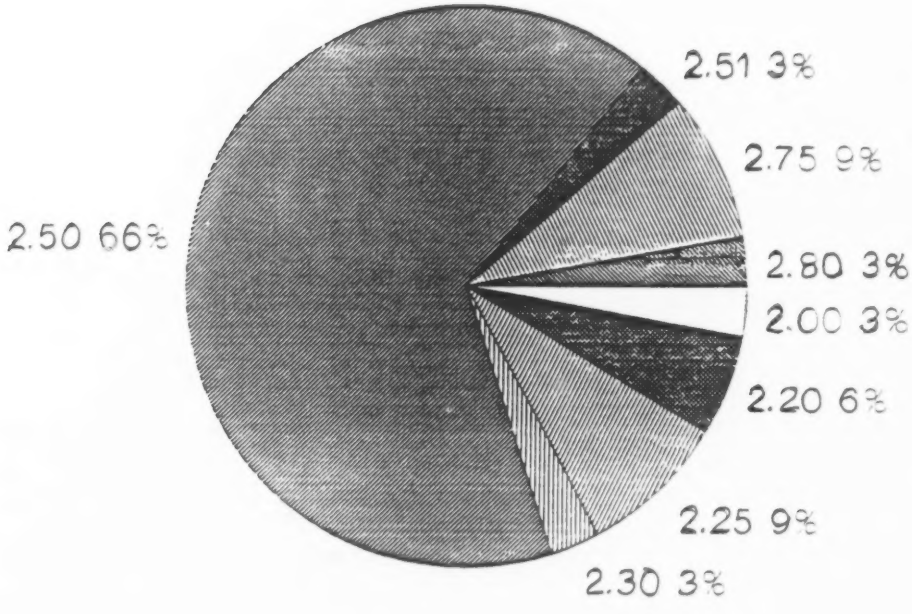

Figure 14. Admission requirements for marketing teacher education: Cumulative grade point average (n = 35; M = 2.40).

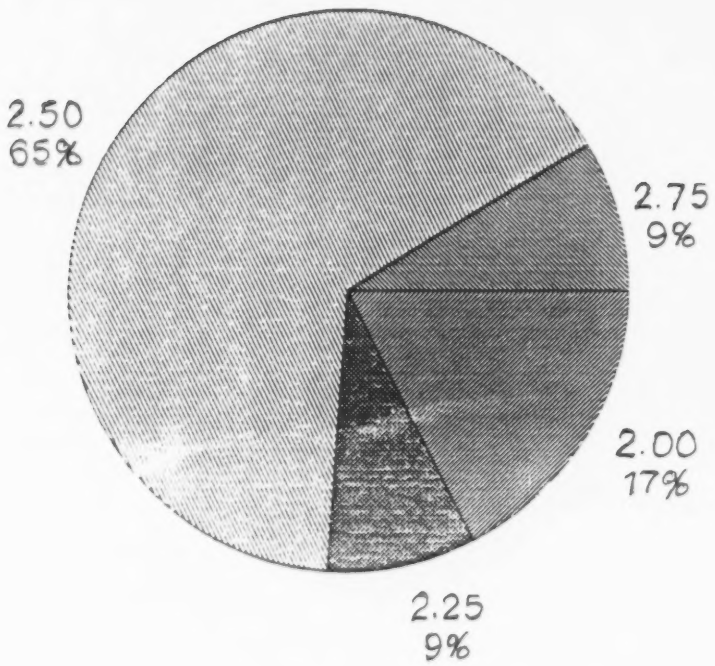

Figure 15. Admission requirements for marketing teacher education: Grade point average in academic major (n = 23; M = 2.41).

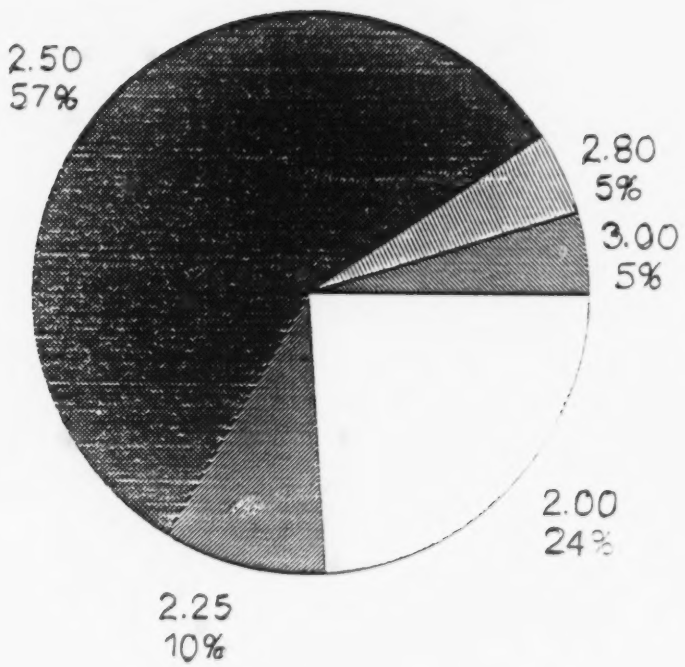

Figure 16. Admission requirements for marketing teacher education: Grade point average in education courses (n = 21; M = 2.39).

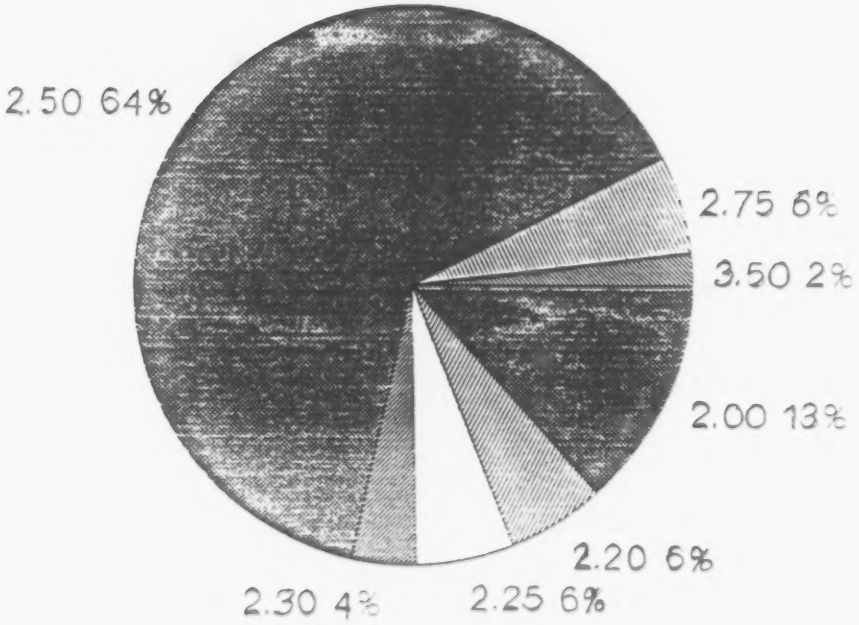

Figure 17. Admission requirements for technology teacher education/industrial arts: Cumulative grade point average (n = 53; M = 2.43).

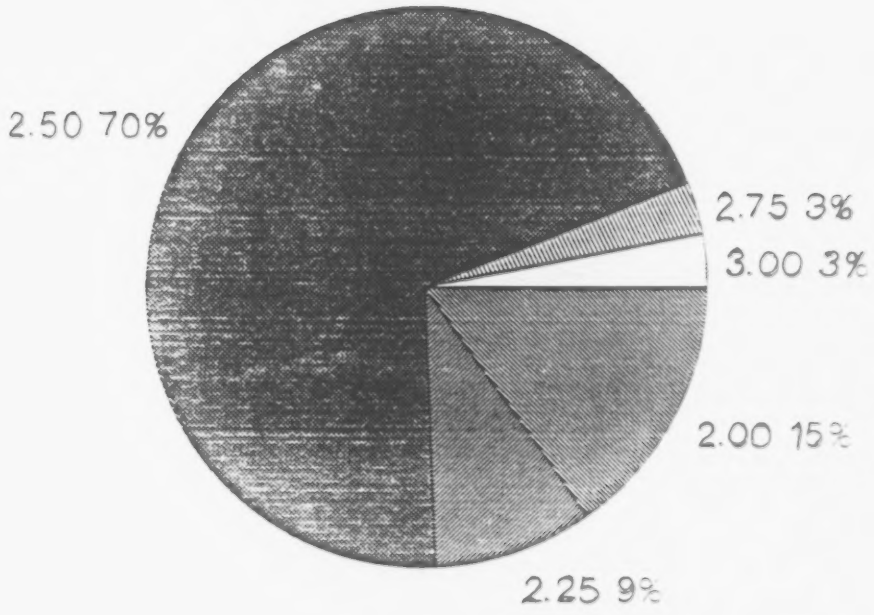

Figure 18. Admission requirements for technology teacher education/industrial arts: Grade point average in academic major ($\underline{n}$ = 33; $\underline{M}$ = 2.42).

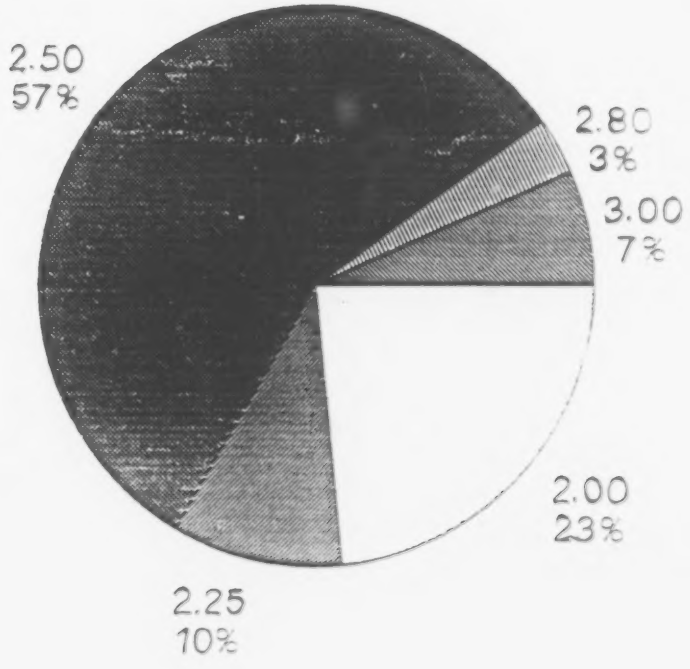

Figure 19. Admission requirements for technology teacher education/industrial arts: Grade point average in education courses (n = 30; M = 2.44).

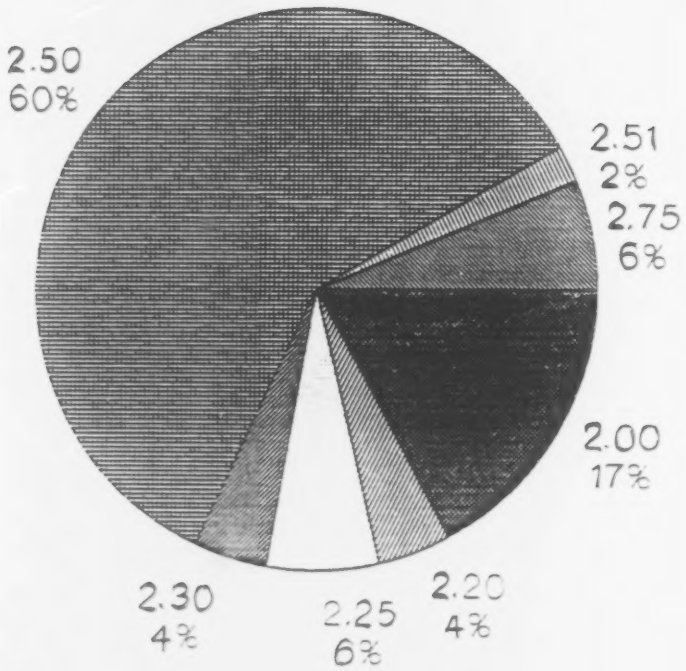

Figure 20. Admission requirements for trade and industrial teacher education: Cumulative grade point average ($\underline{n}$ = 47; $\underline{M}$ = 2.39).

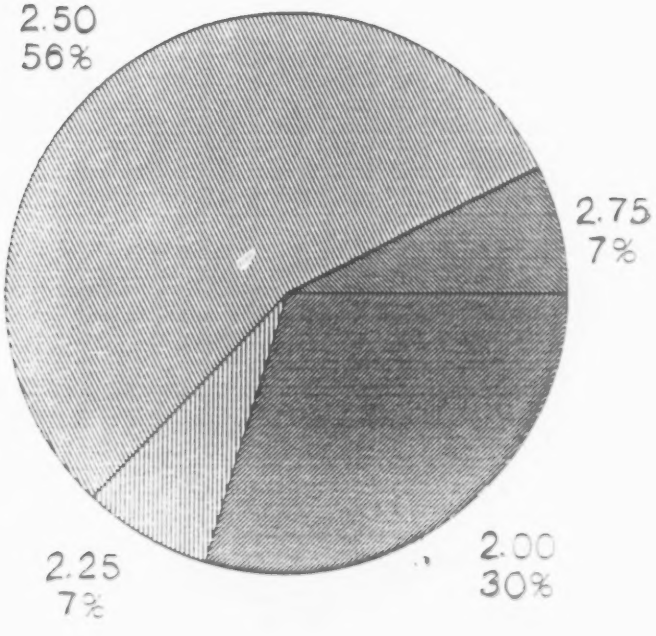

Figure 21. Admission requirements for trade and industrial teacher education: Grade point average in academic major ($\underline{n}$ = 27; $\underline{M}$ = 2.35).

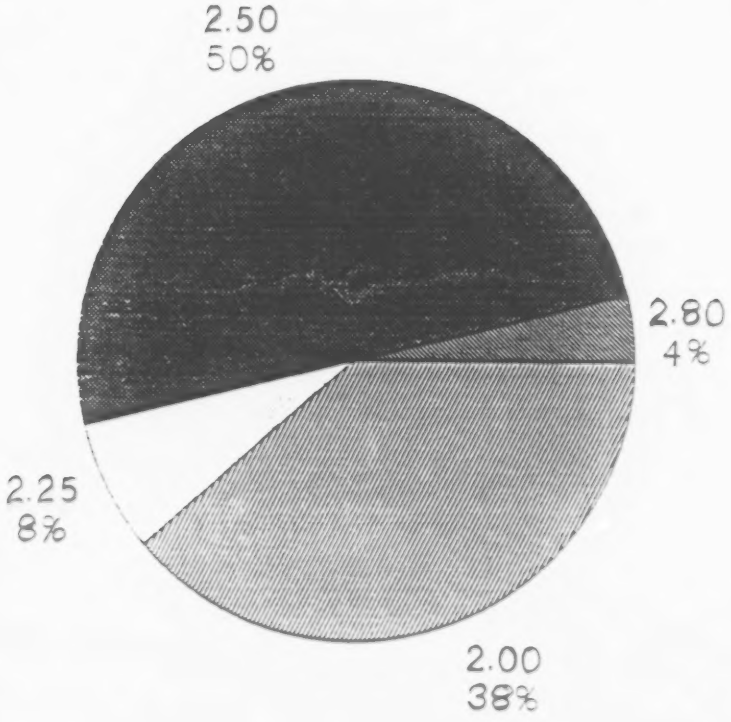

Figure 22. Admission requirements for trade and industrial teacher education: Grade point average in education courses (n = 28, M = 2.14).

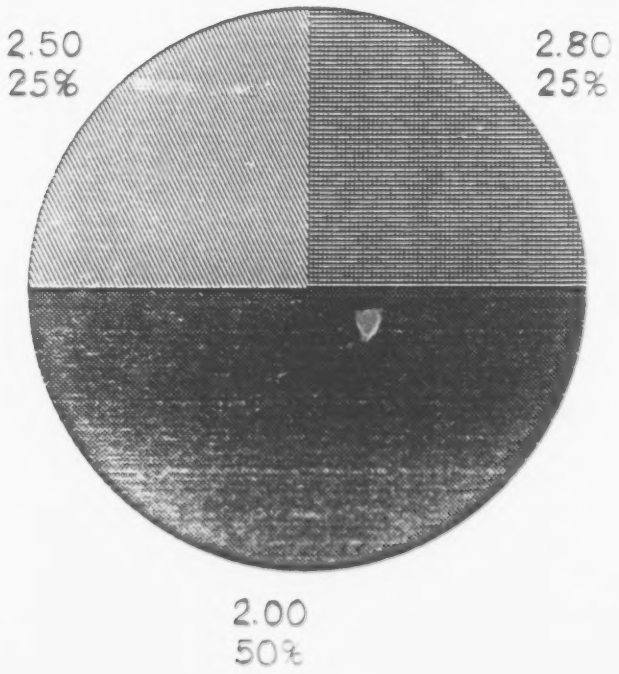

Figure 23. Admission requirements for vocational special needs teacher education: Grade point average in education courses ($\underline{n}$ = 6, $\underline{M}$ = 2.63).

Table 28

Teacher Education Admission Requirements: National Teacher's Examination

Teacher preparation area	National Teacher's Exam							
	General knowledge	No. of institutions	Communication	No. of institutions	Professional knowledge	No. of institutions	Area exams[a]	No. of institutions
Agricultural education	312.21	8	406.64	8	494.57	7	--	--[a]
Business education	429.64	13	493.00	13	470.00	9	--	--[a]
Health occupations education	--	--[a]	--	--[a]	--	--[a]	--	--[a]
Home economics education	372.41	13	433.77	13	385.22	10	--	--[a]
Marketing education	401.00	7	436.00	9	362.92	6	--	--[a]
Technology education/ industrial arts	409.45	13	477.10	13	403.50	10	--	--[a]
Trade and industrial education	360.83	9	306.60	7	305.90	6	--	--[a]
Vocational special needs								
Others	--	--[a]	--	--[a]	--	--[a]	--	--[a]

Note: NIE figures are average minimum standard scores as reported by colleges and universities for the specific vocational teacher education program area.

[a] $n<5$; data not reported.

technology education had the greatest number of respondents, while health occupations education and vocational special needs had fewer than five respondents for any one of the NTE areas; thus, scores are not reported for these programs. Virtually no vocational teacher education program requires area examination from the NTE as an admission requirement.

Within the three NTE areas for which scores are required for admission into teacher education, there are wide variations. In general knowledge, scores ranged from an average of three hundred and twelve (agricultural education, $\underline{n} = 8$) to four hundred and thirty (business education, $\underline{n} = 13$). In communications, required scores ranged from three hundred and seven (trade and industrial, $\underline{n} = 7$) to four hundred and ninety-three (business education, $\underline{n} = 13$). In professional knowledge, the range was three hundred and six (trade and industrial, $\underline{n} = 6$) to four hundred and ninety-five (agricultural education, $\underline{n} = 7$).

Curriculum Parameters

What is the total number of credits required in vocational teacher education programs? How many credits are required in general studies? These and other questions relating to curriculum parameters were asked of the seventy-eight respondents to the Institutional Questionnaire. Their answers are summarized in Tables 29 (semester-system institutions) and 30 (quarter-system institutions). Data for any categories in Tables 29 and 30 that have fewer than five respondents were omitted (e.g., special needs).

The total number of semester credits required for all vocational teacher education programs is one hundred and twenty-eight. Agricultural education reported the highest number of semester credits required for graduation with an average of slightly more than one hundred and thirty-one total credit hours ($\underline{n} = 34$); home economics ($\underline{n} = 50$) required nearly one hundred and twenty-nine.

Approximately thirty-seven percent of all curriculum requirements for vocational teacher education programs are in general studies (typically courses in mathematics, science, English, humanities, social studies, and other areas of arts and science). Only slight differences were reported for program area requirements for general studies. The

range was nearly forty-eight credit hours for agricultural education (n = 25) to nearly forty-six credit hours for home economics education (n = 45).

Approximately twenty-seven percent to thirty-six percent of the total semester credit hours required for graduation by vocational teacher education students must be in content courses; that is, the students' specific teaching field. Typically these are major or subject matter courses or experiences (e.g., from academic units in agriculture, business, family and child development, technology, or engineering). The nearly forty-seven hours semester credit required by agricultural education (n = 33) in subject-matter was followed closely by home economics with forty-six (n = 47) and business education with nearly forty-six (n = 39). The minimum was an average of nearly thirty-six credit hours required by health occupations education (n = 11).

Next, respondents were asked to provide information about the maximum credits allowed or required for occupational experience or business/industry internship. Trade and industrial education (n = 14), health occupations education (n = 6), and technology education (n = 5) reported the highest maximum allowances with approximately twenty-two, twenty-one, and sixteen semester credit hours, respectively. Marketing education (n = 8) reported the lowest requirement or allowance for occupational experience/internships with five semester credit hours. Only two vocational teacher education programs allow academic credit to be earned through the use of occupational competency testing. Trade and industrial education allows or requires up to nearly twenty-seven semester credits (approximately twenty-one percent of total credits required for graduation) through competency testing (i.e., NOCTI exams) (n = 21); health occupations follows closely with twenty-six (n = 6) or about twenty percent of the credits typically required for graduation.

Vocational pedagogy requirements, typically comprised of program specific or general vocational curriculum, methods, laboratory or shop management, or cooperative education courses are also reported in Tables 29 and 30. The minimum number of pedagogy semester credit hours required was about twelve (business education, n = 32); the maximum was sixteen (health occupations education, n = 13).

Education foundation courses are education courses offered outside vocational education such as educational psychology, multicultural education, educational philosophy, and so forth. Responses to the Institutional Questionnaire found the average number of

Table 29

Curriculum Requirements by Vocational Teacher Education Program Areas: Semester System

Category	Vocational teacher education program areas with number of respondents															
	Ag Ed		Bus Ed		Health		Home Ec		Mk Ed		Tech Ed/IA		T & I		Sp Needs	
	Sem. cr.hrs.	No. of resp.	Sem. cr.hrs.	No. of resp.	Sem. cr.hrs.	No. of resp.	Sem. cr.hrs.	No. of resp.	Sem. cr.hrs.	No. of resp.	Sem. cr.hrs.	No. of resp.	Sem. cr.hrs.	No. of resp.	Sem. cr.hrs.	No. of resp.
Total credits required for graduation	131.24	34	127.73	42	127.64	11	128.70	50	127.55	28	128.12	47	127.67	45	--	--9
Credits required in general studies[a]	47.69	35	46.31	39	46.79	14	45.81	45	47.18	28	46.53	46	46.10	41	--	--9
Subject matter credits required[b]	46.85	33	45.82	39	35.54	11	46.29	47	43.23	26	43.62	43	39.58	34	--	--9
Occupational experience[c]	7.57	7	8.40	5	20.66	6	7.50	10	5.12	8	15.80	5	21.78	14	--	--9
Competency testing[d]	--	--9	--	--9	26.00	6	--	--9	--	--9	--	--9	26.52	21	--	--9
Vocational pedagogy[e] credits required	12.63	30	11.68	32	16.23	13	11.92	40	13.58	24	13.61	36	15.48	37	--	--9
Educational foundation[f] credits required	11.62	29	14.11	36	14.07	15	14.53	40	15.04	27	14.47	36	13.34	35	--	--9
Credits required in student teaching	10.02	32	10.03	40	9.58	12	10.03	47	10.09	28	10.54	41	9.83	36	--	--9
Other	--[h]	4	--[h]	5	--[h]	2	--[h]	9	--[h]	1	--[h]	9	--[h]	8	--	--9

[a]Typically courses in mathematics, science, English, humanities, social studies, and other areas of arts and sciences. [b]Typically major or content courses or experiences (e.g., from academic units in agriculture, business, family and child development, engineering). [c]Maximum credits allowed or required for occupational experience or business/industry internship. [d]Maximum credits allowed or required for competency testing (i.e., NOCTI exams). [e]Typically in program specific or general vocational curriculum, methods, laboratory or shop management, cooperative education courses. [f]Education courses offered outside vocational education such as educational psychology, multicultural education, educational philosophy. [g]$n<5$; no data reported. [h]See discussion.

Table 30

Curriculum Requirements by Vocational Teacher Education Program Areas: Quarter System

Category	Ag Ed		Bus Ed		Health		Home Ec		Mk Ed		Tech Ed/IA		T & I		Sp Needs	
	Qtr. cr.hrs.	No. of resp.	Qtr. cr.hrs.	No. of resp.	Qtr. cr.hrs.	No. of resp.	Qtr. cr.hrs.	No. of resp.	Qtr. cr.hrs.	No. of resp.	Qtr. cr.hrs.	No. of resp.	Qtr. cr.hrs.	No. of resp.	Qtr. cr.hrs.	No. of resp.
	Vocational teacher education program areas with number of respondents															
Total credits required for graduation	195.8	5	193.63	8	--	--[g]	193.00	9	194.14	7	188.56	9	195.63	8	--	--[g]
Credits required in general studies[a]	66.00	6	62.40	10	--	--[g]	56.00	9	65.00	7	53.90	10	62.89	9	--	--[g]
Subject matter credits required[b]	71.00	5	56.75	8	--	--[g]	58.25	8	58.16	6	65.87	8	51.00	7	--	--[g]
Occupational experience[c]	--	--[g]	--	--[g]	--	--[g]	--	--[g]	--	--[g]	--	--[g]	--	--[g]	--	--[g]
Competency testing[d]	--	--[g]	--	--[g]	--	--[g]	--	--[g]	--	--[g]	--	--[g]	38.42	7	--	--[g]
Vocational pedagogy[e] credits required	20.80	5	19.12	8	--	--[g]	19.42	7	26.16	6	15.28	7	28.57	7	--	--[g]
Educational foundation[f] credits required	14.80	5	20.00	8	--	--[g]	20.25	8	17.67	6	24.13	8	17.71	7	--	--[g]
Credits required in student teaching	13.40	5	13.29	7	--	--[g]	10.50	55	14.40	5	13.43	7	13.71	7	--	--[g]
Other	--	--	--	--[g]	--[h]	1	--[h]	2	--[h]	1	--	--	--	--	--	--

[a]Typically courses in mathematics, science, English, humanities, social studies, and other areas of arts and sciences. [b]Typically major or content courses or experiences (e.g., from academic units in agriculture, business, family and child development, engineering). [c]Maximum credits allowed or required for occupational experience or business/industry internship. [d]Maximum credits allowed or required for competency testing (i.e., NOCTI exams). [e]Typically in program specific or general vocational curriculum, methods, laboratory or shop management, cooperative education courses. [f]Education courses offered outside vocational education such as educational psychology, multicultural education, educational philosophy. [g]$n<5$; no data reported. [h]See discussion.

semester credits in educational foundation courses ranged from nearly twelve (agricultural education, n = 29) to fifteen (marketing education, n = 27).

There was little difference between the number of student teaching credit hours required by program areas. Nearly all require ten semester hours with a range from 9.58 in health occupations education (n = 12) to 10.54 in technology education (n = 41).

The last category listed in Table 29 was titled *Other* in which respondents were given an opportunity to list other curriculum requirements. Among the requirements listed were computer literacy (one respondent), special education course (two respondents), and cognate (one respondent).

Table 30 presents data about curriculum requirements from colleges and universities with vocational teacher education programs that use a quarter system. It should be noted that no program area data are reported for categories in Table 30 with less than five respondents. Compared with Table 29, Table 30 has considerably more categories for which no data are reported which corresponds to the smaller numbers of institutions using the quarter system (as opposed to the semester system).

In terms of total quarter credit hours required for graduation, program areas reported an average difference of slightly more than seven credit hours: Nearly one hundred and eighty-nine for technology education (n = 9) to one hundred and ninety-six for agricultural education (n = 5). With n = 5, no data was reported from health occupations education and vocational special needs.

The average number of quarter credit hours in general studies ranged from fifty-four in technology education (n = 10) to sixty-six in agricultural education (n = 6). Again, there is no data reported for health occupations and vocational special needs.

There appears to be wide disparity in subject-matter credits required across program areas of institutions using a quarter system. For example, trade and industrial education (n = 7) reported fifty-one subject matter credits required while agricultural education (n = 5) reported seventy-one credits required.

There were fewer than five respondents across all program areas to the query for information about occupational experience requirements. For competency testing, only trade and industrial education had an adequate number of responses for which to report data: an average of thirty-eight ($\underline{n} = 7$).

The variation for vocational pedagogy credits required ranged from fifteen quarter credit hours for technology education ($\underline{n} = 7$) to nearly twenty-nine for trade and industrial education ($\underline{n} = 7$). Required education foundation credits ranged from nearly fifteen quarter credits in agricultural education ($\underline{n} = 5$) to twenty-four in technology education ($\underline{n} = 8$).

For credits required in student teaching, home economics education reported the lowest number—10.5 ($\underline{n} = 50$) quarter credits. Otherwise, other program areas were clustered between thirteen and fourteen credits required. With an $\underline{n} = 5$, no data is reported for health occupations and vocational special needs.

Methods

Respondents were asked to identify methods or experiences, typically used to prepare vocational education teachers, that were exit requirements from their institutions. Respondents were also asked to write a brief description of the requirement. Their responses are summarized in Table 31.

Nearly sixty percent of all institutions responding to this survey required experiences in at least six of the identified categories. In rank order, the six experiences include prestudent teaching activities in schools, computer applications, advising vocational youth organizations, industry- or business-based experience, preparation to work with at-risk or special needs students, and preparation to work with business- or industry-based groups. Considerably fewer programs require methods or experiences on integrating basic skills with vocational education, providing occupational guidance, or organizing and administering adult vocational education classes.

Respondents were also given an opportunity to note methods/experiences used by their institution that were not listed on the Institutional Questionnaire. Their responses included requirements for a leadership seminar; safety concepts; curriculum development

Table 31

Methods/Experiences Used to Prepare Vocational Education Teachers (Exit Requirements)

Method	No. of respondents	Descriptions
Prestudent teaching experience (early clinical experience)	63	Responses varied: some institutions required a minimum of 1 cr. hr., others a maximum of 150 clock hours.
Industry- or business-based occupational experience	55	Responses varied: Some institutions required as little as 2,000 to as much as 8,000 hours; some noted as long as 6 years. T&I was mentioned most frequently as requiring this type of experience.
Preparation to work with at-risk or special needs students	49	Twenty respondents specifically noted a 3-credit course was required for one or more program areas. Fourteen respondents noted this requirement was infused in one or more courses.
Computer applications	58	Fifty-five respondents noted that some form of computer literacy courses were required; 25 specifically listed a 3-, 4-, or 5-hour course: requirements varied by program area.

(table continues)

Table 31 (continued)

Methods/Experiences Used to Prepare Vocational Education Teachers (Exit Requirements)

Method	No. of respondents	Descriptions
Advising vocational youth organizations	56	Nine respondents noted a 3-credit course was required; requirements vary between program areas. Some have a 1-hour course, or topic may be infused in methods courses.
Organizing/administering adult vocational education classes	28	Fulfillment of this requirement varies: some institutions have 1-, 2-, or 3-credit course; others infuse into existing courses.
Vocational/occupational guidance	32	Most respondents noted that this requirement was fulfilled through a 3-credit course or through regular methods courses.
Preparation to work with business- or industry-based groups (cooperative education employers, advisory committees, PIC councils, etc.)	46	Requirements vary widely for program areas: some require separate courses, others integrate it into existing courses.
Integrating basic skills with vocational education	33	Three respondents require a 3-credit course; others noted basic skills are somewhat infused in regular methods courses.

(goals, objectives, task analysis, sequencing, performance-based instruction); and specific courses (which were not identified other than by letter/number descriptions).

Exit Requirements

Respondents were asked to describe the exit requirements used by their institutions. They were asked to indicate the minimum cut-off scores for each vocational teacher education program area for (1) cumulative grade point average, (2) grade point average in academic major, and (3) grade point average in education courses. Respondent data is summarized in Figures 24 through 45.

Generally, the standard exit grade point average across all program areas for all categories (i.e., cumulative grade point average, courses in academic major, and courses in education) was 2.5 (with exception of grade point average in education courses for health occupations education). It was interesting to note that the required exit cumulative grade point average was less than the required admissions cumulative grade point average at institutions responding to this study.

There was not a great variation overall between the numbers of institutions reporting admissions and exit data for the NTE. However, exit scores were considerably higher with much less variation between program area requirements (see Table 32). Data is not reported for any categories with $\underline{n} = 5$, which included all categories for health occupations education and vocational special needs. Neither were there adequate responses in the area exams category for agricultural, marketing, and trade and industrial education.

General knowledge cut-off scores on the NTE ranged from nearly six hundred and forty-two (agricultural education, $\underline{n} = 5$) to six hundred and forty-six (business education, $\underline{n} = 8$). Again, exit requirements relating to communications reported by program areas had little variation: 647.5 for agricultural education ($\underline{n} = 6$) to 650.5 for business education ($\underline{n} = 8$). Professional knowledge varied only from six hundred and forty-three (marketing education, $\underline{n} = 8$) to six hundred and forty-four (technology education, $\underline{n} = 9$). Only three program areas had adequate data to report minimum cut-off scores for area exams of the NTE: business education, (539, $\underline{n} = 8$), home economics education (508, $\underline{n} = 9$), and technology education (547.5, $\underline{n} = 8$).

REFORM

An open-ended question was included on both the Institutional Questionnaire and the National Survey of Professors of Vocational Teacher Education to determine any effects on vocational teacher education emanating from education reform movements, state policy board or legislative mandates, or administrative fiat at the college or universities surveyed. From the responses to the question, it is not possible to describe specifically the scope nor to determine any specific effects of reform on vocational teacher education. The data does not yield statistics or percentages related to various reform proposals such as those posited by the Carnegie Forum on Education and the Economy (1986) and the Holmes Group (1986). However, a few general themes did surface and are presented to provide information. The themes and related commentary within the themes are provided in the order in which the most comments were received.

Theme 1—Increases and/or Modifications in Requirements by the Institutions

It was apparent from the open-ended question that the greatest changes in vocational teacher education have been an increase in requirements imposed by some colleges and universities. The greatest change seems to be to stiffen the requirements for entry into teacher education. Grade point averages have been raised, basic skills tests are increasingly being required, and an increase in the number of general education or liberal studies are being required—all prior to admission into teacher education.

The second major requirement has been to increase the amount of time devoted to student teaching and field-based internships. Some other process requirements for student teaching have also been increased such as more specificity relative to assignment and performance assessment.

The third major change has been to increase exit requirements. Similar to entrance requirements, the changes seem to be to increase required grade point averages and mandate minimal scores on examinations.

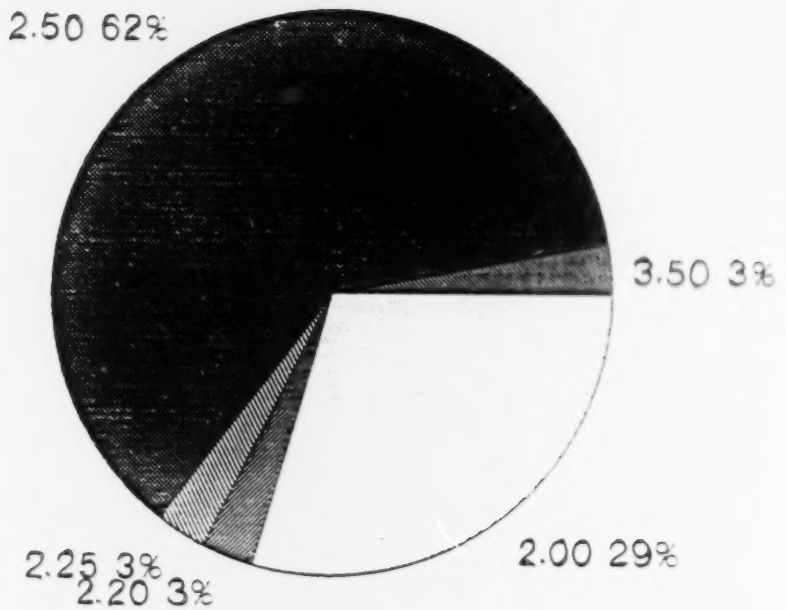

Figure 24. Exit requirements for agricultural teacher education: Cumulative grade point average ($\underline{n}$ = 34; $\underline{M}$ = 2.36).

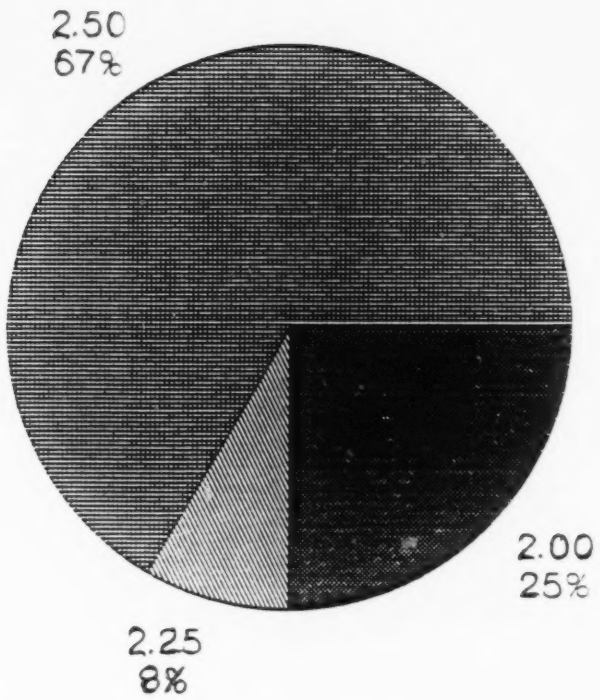

Figure 25. Exit requirements for agricultural teacher education: Grade point average in academic major ($\underline{n}$ = 24; $\underline{M}$ = 2.44).

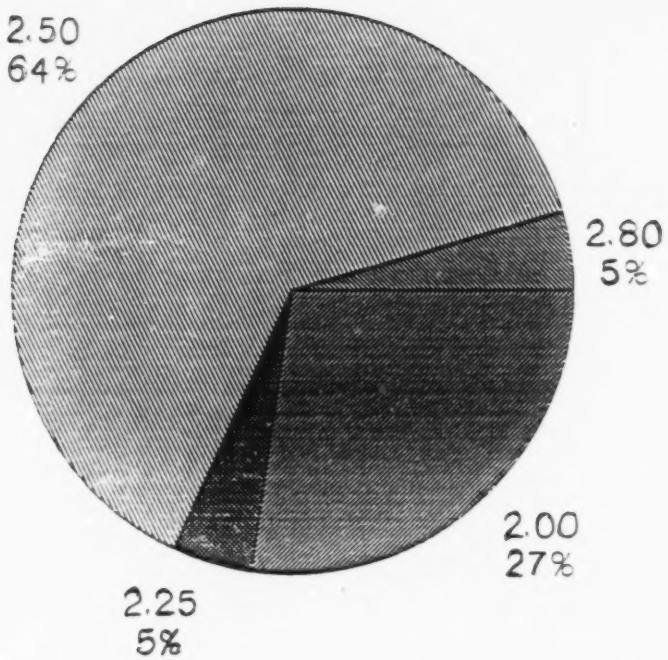

Figure 26. Exit requirements for agricultural teacher education: Grade point average in education courses (n = 22; M = 2.37).

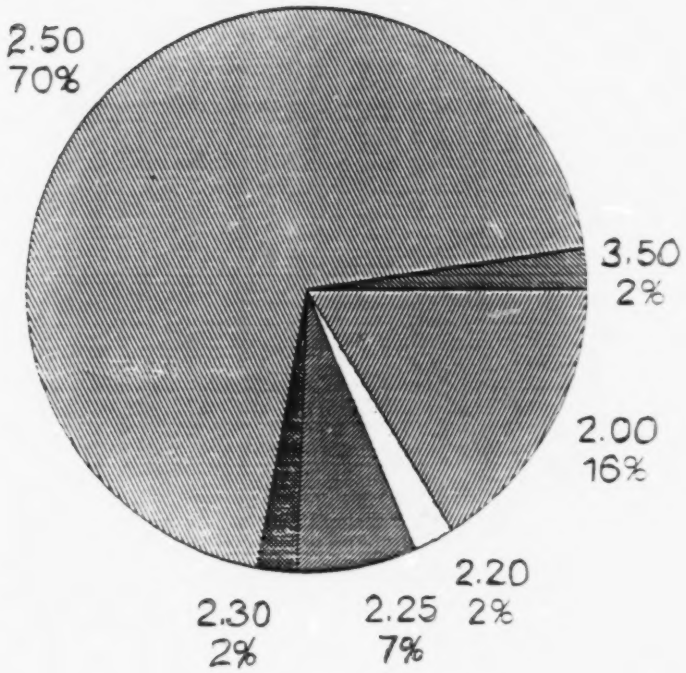

Figure 27. Exit requirements for business teacher education: Cumulative grade point average ($\underline{n}$ = 43; $\underline{M}$ = 2.65).

Figure 28. Exit requirements for business teacher education: Grade point average in academic major (n = 36; M = 2.44).

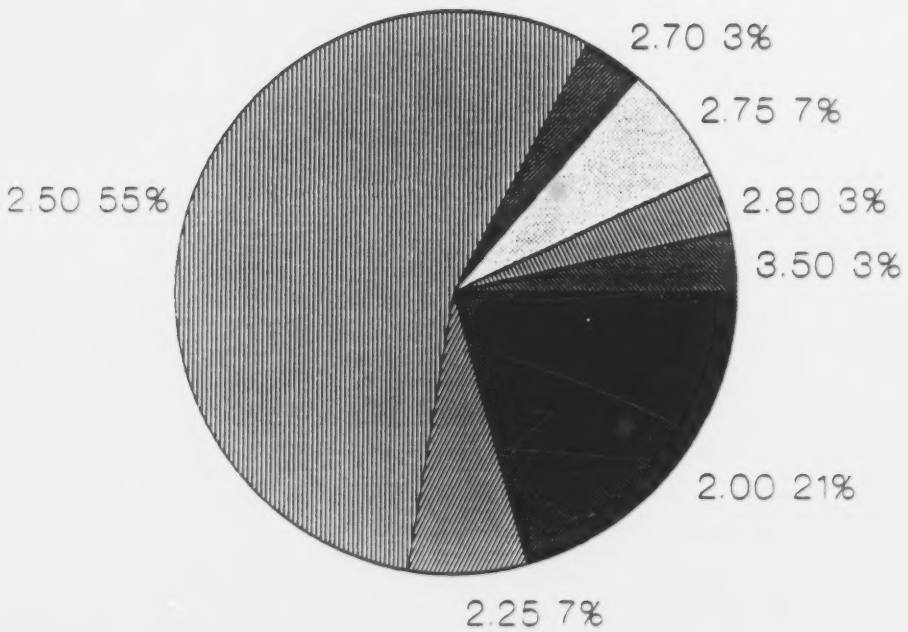

Figure 29. Exit requirements for business teacher education: Grade point average in education courses ($\underline{n}$ = 29; $\underline{M}$ = 2.43).

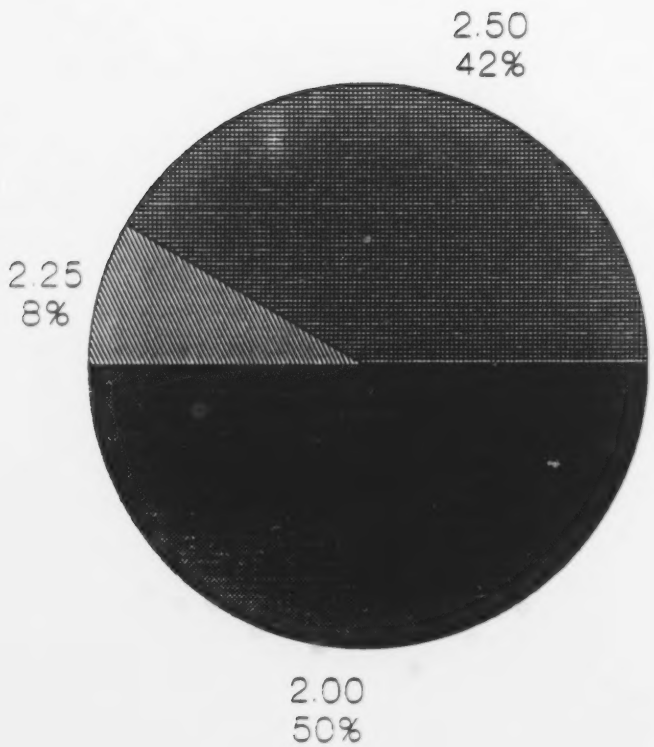

Figure 30. Exit requirements for health occupations teacher education: Cumulative grade point average (n = 12; M = 2.22).

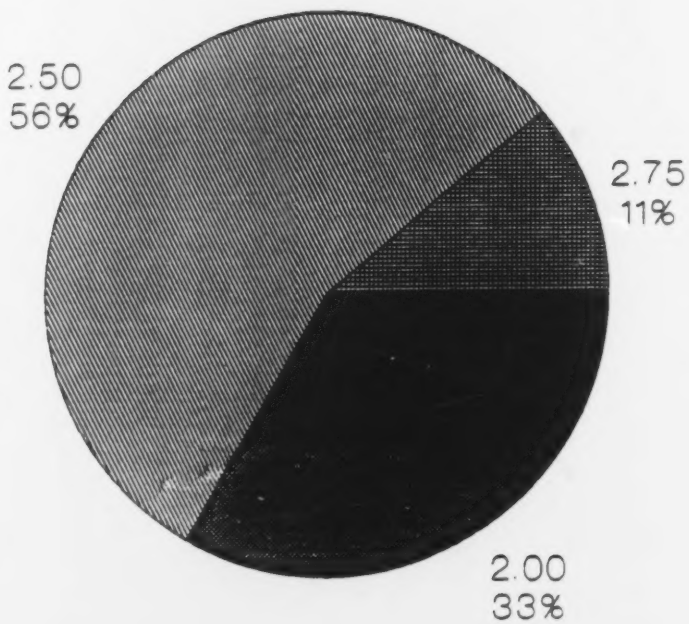

Figure 31. Exit requirements for health occupations teacher education: Grade point average in academic major ($n = 9$; $M = 2.36$).

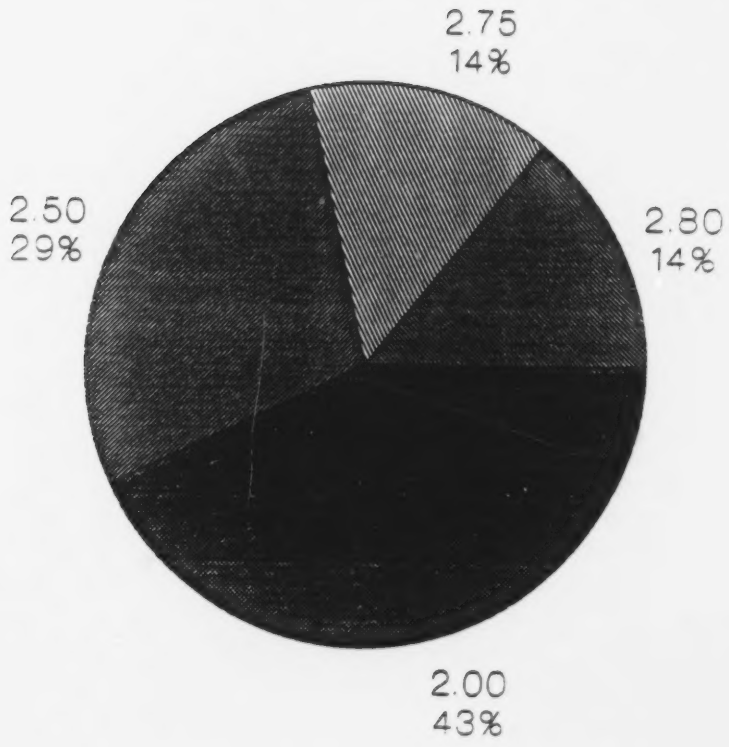

Figure 32. Exit requirements for health occupations teacher education: Grade point average in education courses ($n = 7$; $M = 2.36$).

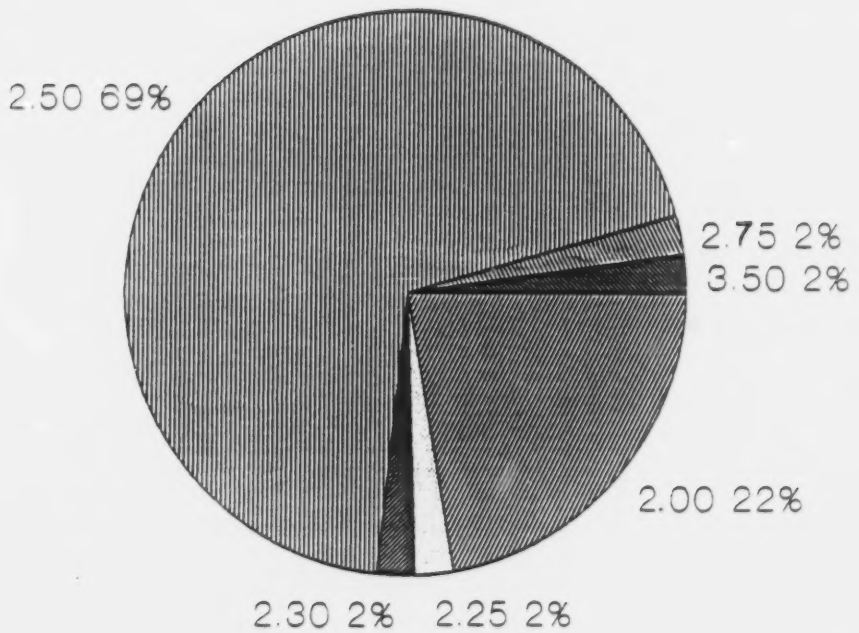

Figure 33. Exit requirements for home economics teacher education: Cumulative grade point average (n = 45; M = 2.40).

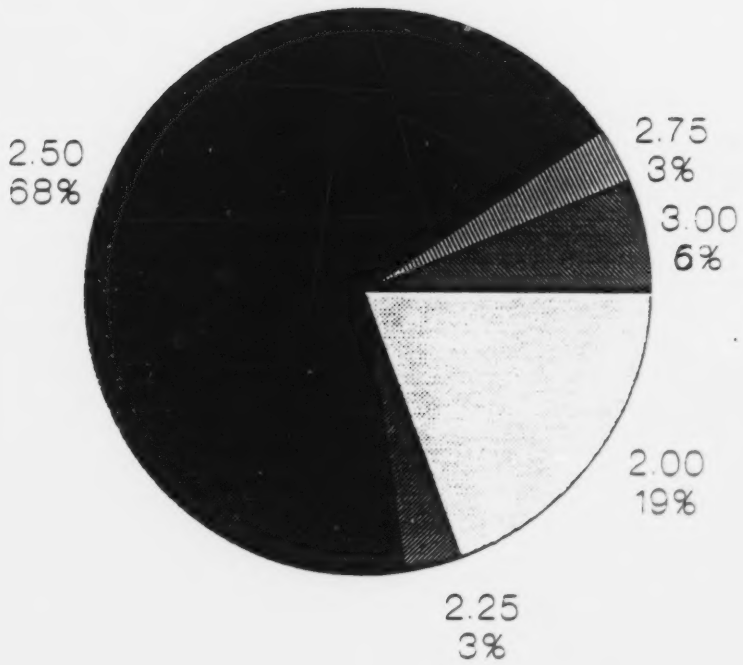

Figure 34. Exit requirements for home economics teacher education: Grade point average in academic major ($n = 31$; $M = 2.44$).

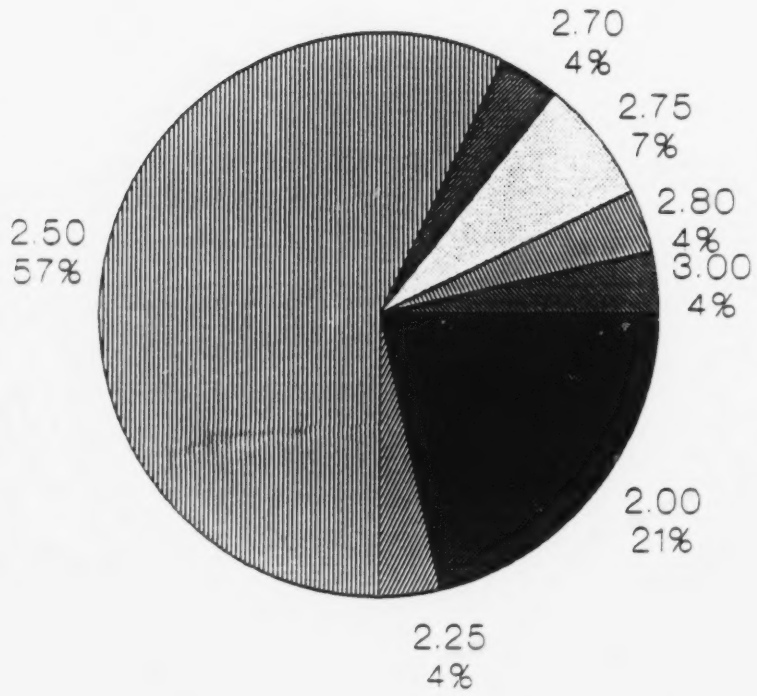

Figure 35. Exit requirements for home economics teacher education: Grade point average in education courses (n = 28; M = 2.44).

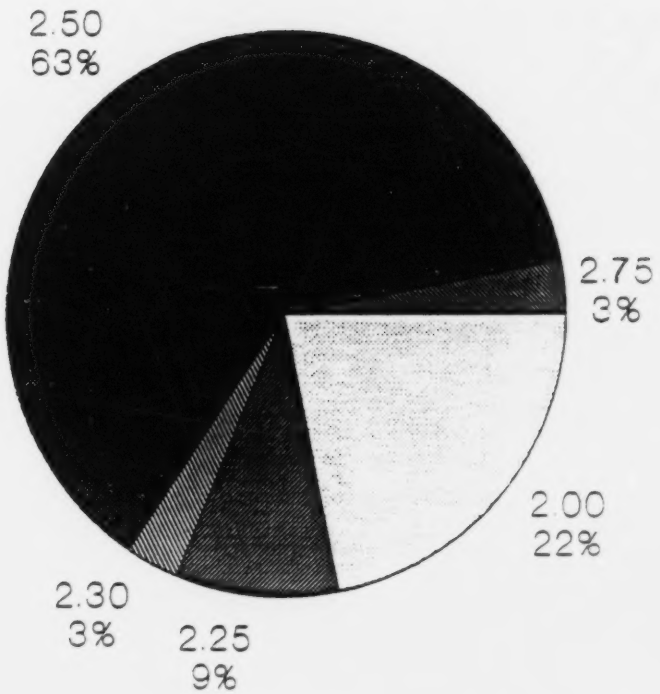

Figure 36. Exit requirements for marketing teacher education: Cumulative grade point average ($n = 32$; $\underline{M} = 2.37$).

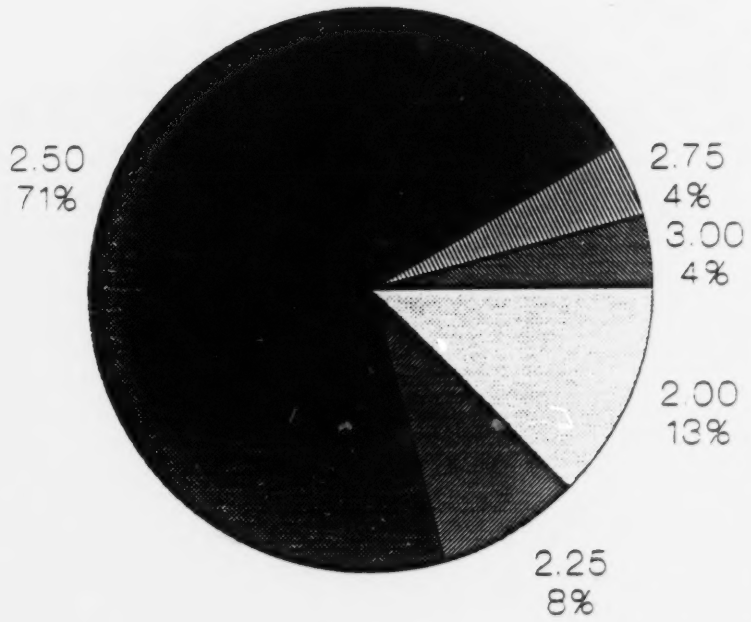

Figure 37. Exit requirements for marketing teacher education: Grade point average in academic major (n = 24; M = 2.45).

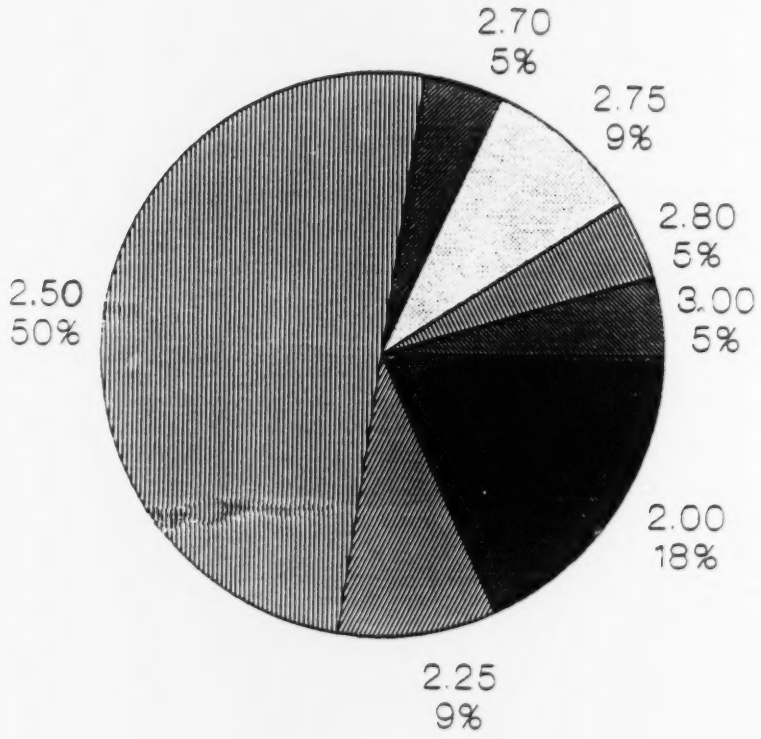

Figure 38. Exit requirements for marketing teacher education: Grade point average in education courses ($n = 22$; $M = 2.32$).

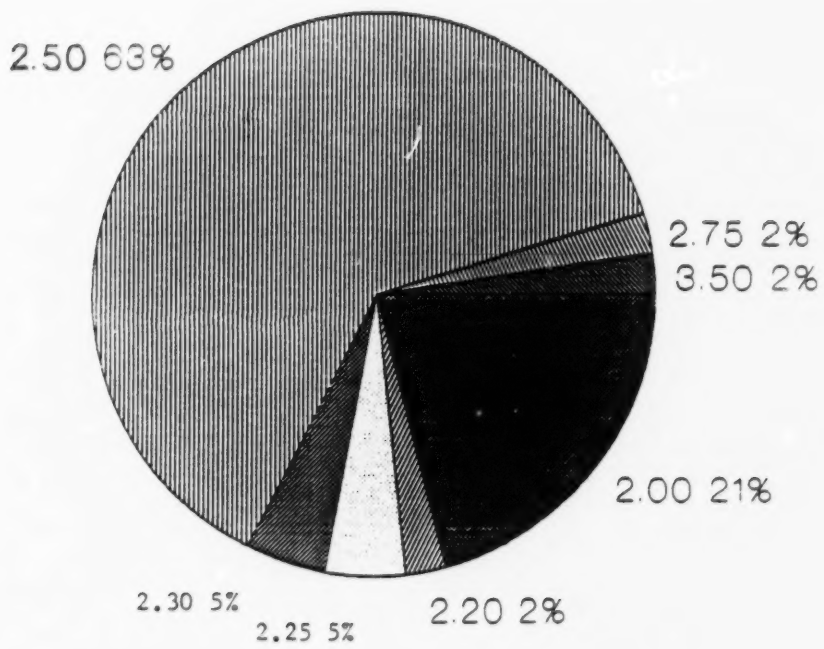

Figure 39. Exit requirements for technology teacher education/industrial arts: Cumulative grade point average ($\underline{n} = 43$; $\underline{M} = 2.40$).

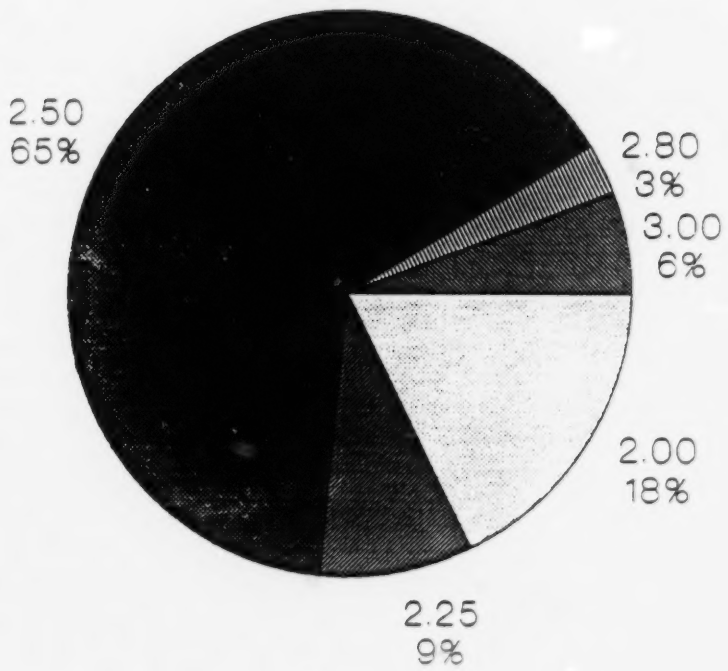

Figure 40. Exit requirements for technology teacher education/industrial arts: Grade point average in academic major ($\underline{n}$ = 34; $\underline{M}$ = 2.43).

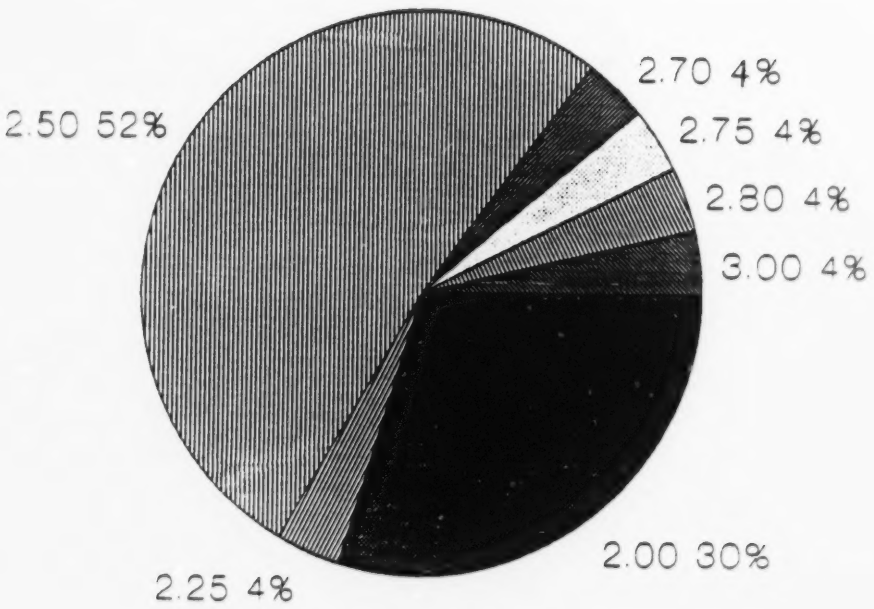

Figure 41. Exit requirements for technology teacher education/industrial arts: Grade point average in education courses (n = 27; M = 2.39).

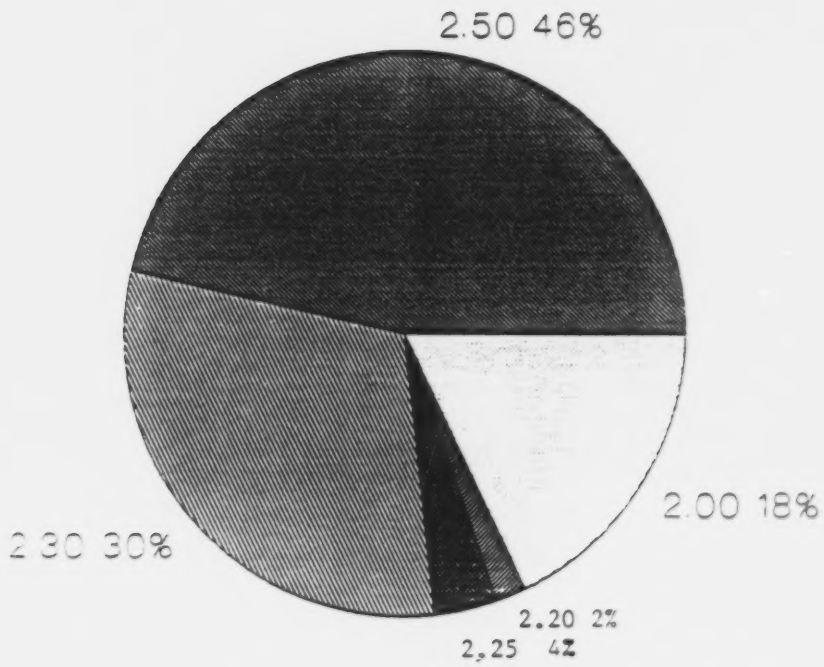

Figure 42. Exit requirements for trade and industrial teacher education: Cumulative grade point average (n = 40; M = 2.35).

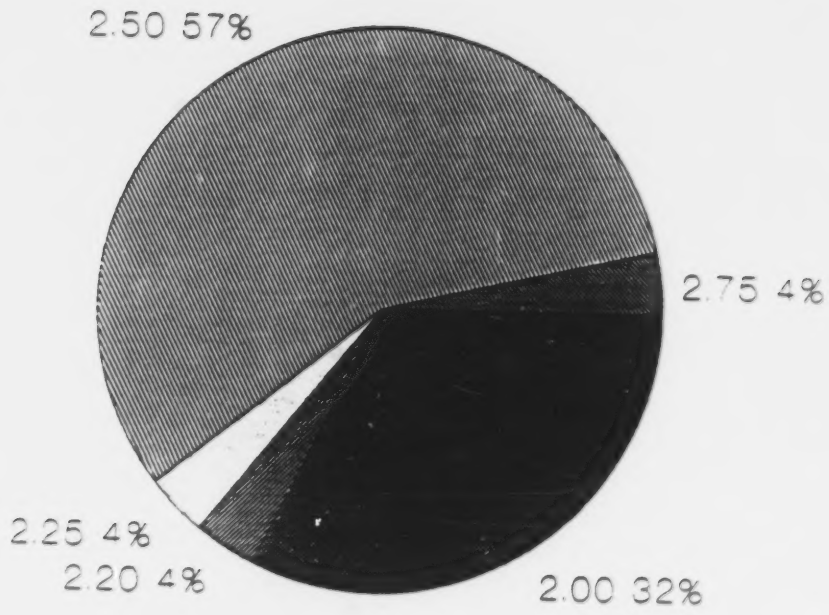

Figure 43. Exit requirements for trade and industrial teacher education: Grade point average in academic major (n = 28; M = 2.42).

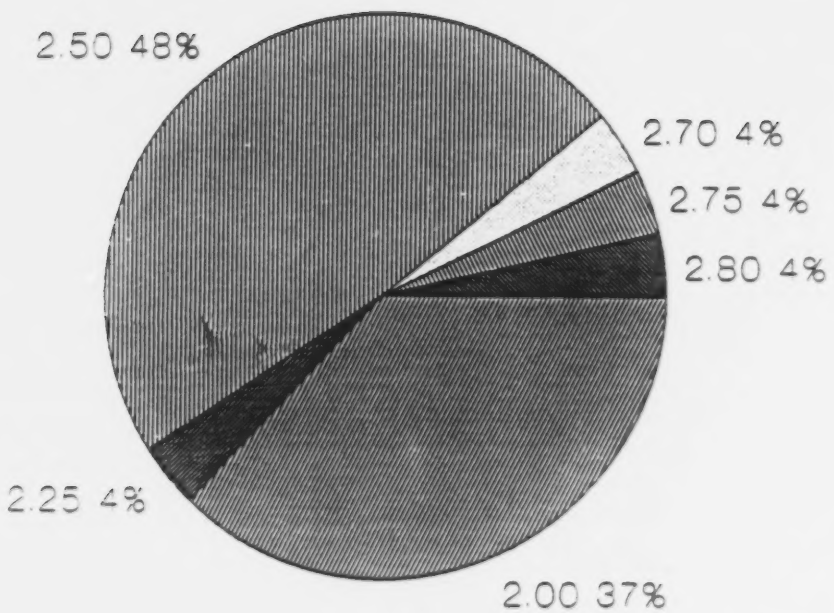

Figure 44. Exit requirements for trade and industrial teacher education: Grade point average in education courses ($n = 27$; $M = 2.33$).

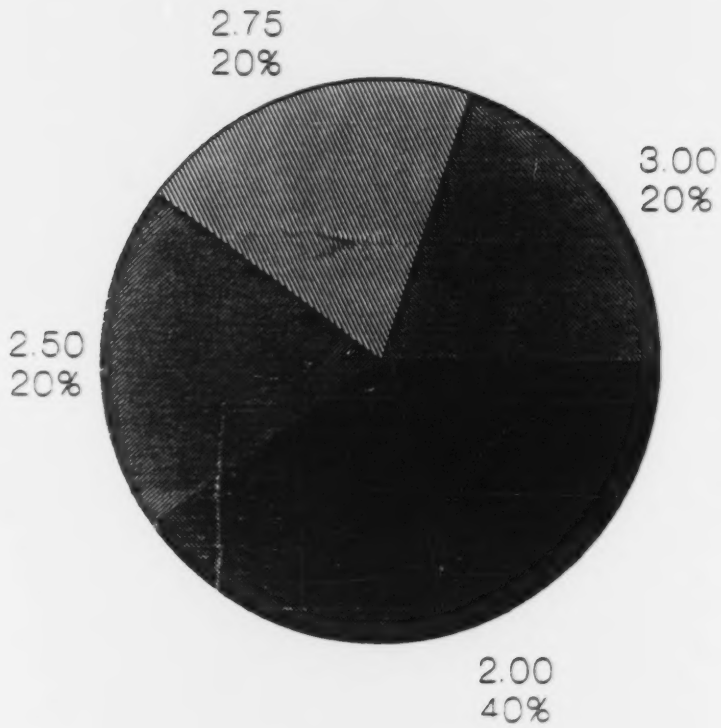

Figure 45. Exit requirements for vocational special needs teacher education: Cumulative grade point average ($\underline{n} = 5$; $\underline{M} = 2.45$).

Table 32

Teacher Education Exit Requirements. National Teacher's Examination

Teacher preparation area	National Teacher's Exam							
	General knowledge	No. of institutions	Communication	No. of institutions	Professional knowledge	No. of institutions	Area exams[a]	No. of institutions
Agricultural education	641.80	5	647.50	6	643.16	6	—	--[a]
Business education	646.00	8	650.50	8	643.77	9	538.75	8
Health occupations education	—	--[a]	—	--[a]	--	--[a]	N/A	—
Home economics education	643.75	8	648.88	9	643.63	11	507.77	9
Marketing education	643.10	7	649.75	8	643.00	8	—	--[a]
Technology education/ industrial arts	644.50	8	649.50	8	644.00	9	547.50	8
Trade and industrial education	643.16	6	648.00	6	643.87	8	—	--[a]
Vocational special needs								
Others	—	--[a]	—	--[a]	—	--[a]	N/A	—

Note: NTE figures are average minimum standard scores as reported by colleges and universities for the specific vocational teacher education program area.

[a] N<5; data not reported.

There are some program structure changes. The major change here seems to be to increase the number of credits or courses required in specific categories, such as in general studies or the subject-matter discipline (e.g., from agriculture or business or family living). At some institutions, the increase in the number of subject-related courses resulted in a baccalaureate degree in vocational education or in a specific vocational education program area that is very similar to one offered by the subject-matter discipline. It should be noted that these mandated changes are all external to departments of education and of vocational education/colleges/schools; that is, some university-wide governance system has required the changes.

Closely related, several (at least seven) representatives reported that their college or university was requiring a fifth-year or a postbaccalaureate program for (at least) some of their vocational programs. Business and marketing education were sometimes mentioned specifically as being phased into a five-year program. Others were beginning to require a second major in arts and sciences or a "second concentration" in a basic academic discipline. One university reported that a "professional semester" was now required for all those wishing to earn a teaching credential from the university.

At some colleges and universities, actual curriculum reform (as contrasted with an increase in the number of courses) seems to be occurring. Some reported moving toward a core vocational education curriculum, as well as a core of college of education and university courses; thus, in effect, refocusing courses and narrowing electives and program-specific pedagogy. At some institutions, the applied courses (e.g., in secretarial science, office systems, technology, and trade areas)—as a result of reform or restructuring efforts—are being offered through associate degrees at technical institutes or community colleges. Thus, the upper-division courses have been refocused and the degree resembles other baccalaureate programs at the university. The 2+2+2 program structure concept was also mentioned as an impetus to further support curriculum reform of upper-level baccalaureate courses.

Courses have been added to the teacher preparation program for many vocational educators. Such additional courses have included additional methods courses, computer literacy, evaluation and measurement, instructional technology, and special needs. In some institutions, some of these courses (except methods) are taught generically, that is, for all

prospective teachers. One institution also reported developing specific requirements for elementary, secondary, and middle school youth.

Theme 2—State Policy and Certification Changes

A second theme, much less frequently mentioned than Theme 1, centered around state-mandated changes for vocational teacher education. Several state policy changes, no doubt, provided the catalyst for the many changes discussed under Theme 1. However, many respondents provided information that related specifically to mandated state policy or certification changes that were affecting their programs, in contrast with college or university endeavors (Theme 1).

The major comments here were that states have primarily mandated structural changes in teacher education and increased the requirements for certification for all teachers; and, frequently, vocational education must comply with the mandates. For example, several mentioned that the state is forcing them into a fifth-year or a postbaccalaureate program. Many mentioned that state exit examinations will be or are being required in education, general knowledge, subject matter, and area knowledge. Several mentioned increased state requirements in student teaching hours and scores on basic skills tests.

There were a few comments on subject-specific state policy or certification requirements. In some states, the minimum preparation for trade and industrial education teachers has been raised, including increased professional education coursework and preparation to work with special needs students. Renewal requirements for nondegreed teachers has also been increased in some states. One state, which is requiring a fifth-year program, is allowing work experience to substitute for a baccalaureate degree for vocational education teachers.

One state reported that its teacher education courses must be redesigned congruent with seventy competencies mandated to be included in teacher education programs by that state's department of education. One state is requiring all teachers to attend a state-offered methods-of-instruction workshop. One state is requiring all teachers to complete a new course in reading methods. Interesting, too, is that one state is requiring all university methods and student teaching supervisors to have state certification in their specialties.

Theme 3—Elimination of Programs/Degrees

A few colleges and universities reported that they were considering or actually phasing out all, some, or several aspects of their vocational education programs. It should be noted that these institutional responses were in addition to the (at least ten) administrators at colleges and universities who chose not to complete this survey's Institutional Questionnaire because they were in the process of phasing out all (or most of) their vocational education programs.

The major point here seemingly is that some institutions are actually eliminating what was formerly technology or applied degrees and are only continuing to offer an education degree. The "new" degree program is in education. Content-specialized staff are being phased out and students must obtain their technical or vocational skills from a community college or postsecondary technical school.

At least two universities reported that they were phasing out undergraduate degrees granted in their College of Education. One university reported significant reduction in the numbers of majors and specializations and a general clustering of majors into two large vocational program areas.

Theme 4—Student Concerns/Issues

Of great concern to many respondents—especially professors—was the low student census in vocational teacher education programs. Of specific note by institutional respondents were the low enrollments in agricultural education and technology education, especially considering their relatively large numbers of faculty.

Some concern was also expressed about the shift in focus of some colleges and universities from education to industry-based training and development programs. Some felt this may be causing enrollment declines in teacher education, especially in postsecondary specialized classes.

There was also some concern expressed about the increased emphasis on nontraditional students (i.e., older-than-average students coming back to school) and the

"pressure" to work with nontraditional students. One respondent indicated that many nontraditional students did not have the background to be successful in vocational teaching.

SUMMARY

The data and information presented in this monograph provide baseline data on preservice vocational teacher education programs in the United States. Data was gathered across the same dimensions from many colleges and universities which purport to offer vocational teacher education programs. The results of this descriptive study are intended to overcome the lack of knowledge about where, when, what, how, to whom, and by whom vocational teacher education is provided. Findings from this data will not guide decision makers with answers to "what works" in vocational teacher education, nor will they translate into detailed courses of action for vocational teacher education. It is hoped that the data and information will initiate mework from which future research efforts can be launched that will improve and strengthen the role and effectiveness of vocational teacher education.

Vocational teacher education exists in some form at four hundred and thirty-two colleges and universities in the fifty states, Puerto Rico, Guam, and Washington, DC. This is approximately one-third of the more than twelve hundred American colleges and universities which have the preparation of teachers as one aspect of their mission. According to information in program area directories, there are ninety vocational teacher education programs in agricultural education, two hundred and thirty-seven in business education, thirty-one in health occupations education, two hundred and sixty-seven in home economics education, eighty-nine in marketing education, one hundred and seventy-eight in technology education (industrial arts), one hundred and twenty in trade and industrial education, and ninety-nine in vocational special needs. A total of one hundred and twelve colleges and universities offer four or more of the traditional vocational teacher education programs. The four programs typically offered are in business, home economics, technology, and trade and industrial education. However, this data is probably somewhat inflated as many programs listed in various directories--at least ten percent of the total—have not had graduates in the past three years or do not consider vocational teacher education as part of their mission.

All of vocational teacher education, where there are at least four or more programs, is in public colleges and universities. The programs are administered in at least eight school/college and six departmental structures, although the dominant administrative structure is for all programs to be in a college of education in a comprehensive vocational education department.

The largest average teacher education faculty units per college or university are in agriculture and technology education; the smallest faculty units are in marketing education and vocational special needs. The largest student enrollments currently are in business education and trade and industrial education. Student census trends show a three-year enrollment increase in vocational special needs, marketing education, business education, and trade and industrial education. Decreases have been in agricultural education, home economics, and technology education.

The overall composite—or profile—of the vocational teacher educator is that he is a white male, probably a full professor, tenured, and forty-nine and a half years old. If indeed he is a full professor, he earned $43,030 for nine months employment in 1989. He completed a doctoral degree in vocational education fourteen years ago—perhaps from Ohio State University. The typical professor had the equivalent of about four and a half years of paid employment in at least two positions in business and industry. He had five and a half years experience as a secondary teacher and either full- or part-time experience as an adult education instructor. He has been working in higher education for sixteen years; thirteen at the college or university where he is presently employed. He tends to be very busy, spending fifty hours each week on his job: fifty-eight percent of the time in teaching, twenty-four percent in service, and eighteen percent in scholarship. Vocational teacher education faculty spend considerably more time in teaching and service activities and considerably less time on scholarship than either they or their university desire; their university particularly would prefer more time spent on scholarship. A vocational education teacher educator typically teaches three undergraduate and two graduate vocational pedagogy courses each year. It is also likely that he teaches subject-matter courses. Apparently, the professor likes his job; he plans to remain in it, at least for the next five years. Eleven percent are planning retirement within five years.

The major model for preparing a vocational education teacher is with a baccalaureate degree, majoring in a vocational education program area. A second model, but much less

frequently used, is through a postbaccalaureate program leading toward a graduate degree. A substantial number of preservice teacher education programs are also offered to certify nonbaccalaureate degree teachers in trade and industrial and health occupations education.

Generally, requirements to both enter and exit a vocational teacher education program are a 2.5 cumulative GPA, a 2.5 GPA in an academic major, and a 2.5 GPA in education courses. Few colleges or universities require a minimal score on the NTE to enter a vocational teacher education program; however, some are now requiring an average minimum score of six hundred and forty-four on general knowledge, a six hundred and forty-nine on communications, and a six hundred and forty-three on professional knowledge to exit.

Generally, the curriculum anatomy of a vocational teacher education student is as follows: total required semester credits = 128; approximately thirty-seven percent or forty-seven of those credits are in general studies; another forty-three credits (thirty-four percent) are in subject-matter courses typically offered in a college external to education or in departments external to vocational education; fourteen credits are in vocational pedagogy; fourteen credits are in education foundations; and ten credits are awarded for student teaching. Other credits may be granted for occupational experience, which means the student probably exceeded the minimum number of hours required for graduation by his or her college or university. Trade and industrial education and health occupations education allow about one-fifth of the total credits required for graduation to be awarded through occupational competency testing.

As a part of the preparation to become a vocational teacher, it can generally be assumed that students received industry- or business-based occupational experience, preparation to work with at-risk or special-needs students, a course in computer applications, preparation on advising vocational youth organizations, preparation to work with business- or industry-based groups, and experience in a prestudent teaching clinical environment. It is less likely that they received instruction in organizing or administering adult vocational education classes, integrating basic skills with vocational education, or in techniques identified with vocational guidance.

Recent changes in vocational teacher education emanating from educational reform movements have been for colleges and universities to require or have imposed on them an

increase in "something"; that is, the grade point or test score requirements for entry into teacher education, the hours required for student teaching, exit requirements, credits or courses in certain categories (e.g., general studies, subject-matter courses, methods), or the length of time required to prepare teachers have been increased at many universities. A few have engaged in actual curriculum reform by revising courses or redesigning program structures to enhance vocational teacher preparation.

Finally, the data is intended to provide information from which to launch more specific and informed studies and possibly to guide policy and decision making about vocational teacher education. Study and possible further analysis of this data should foster a better understanding of the complexities of vocational teacher education, its professoriate, its curriculum and instruction parameters, and the possible effects on its growth and development of various public policy and state-legislated reform movements. Supported with good information and data, policymakers and vocational teacher educators can then begin to reform meaningfully their vocational teacher education programs.

DISCUSSION

This report provides data and related information about vocational teacher education as offered in our nation's colleges and universities. The data was collected to overcome the present lack of knowledge and information about where, when, what, how, to whom, and by whom vocational teacher education is provided. The data is considered baseline and should be useful for comparative purposes by other interested researchers in and about (vocational) teacher education. The following is some discussion relative to the findings of this study, tenets of the reform movement and their effects on vocational teacher education (see, for example, Lynch & Griggs, 1989), and author perspective. This discussion is not meant to be all inclusive; rather, it is offered to identify areas for further research, anomalies in the findings, and some implications.

The Environment of Vocational Teacher Education

The database resulting from this study has been created from public colleges and universities that offer four or more of the traditional vocational teacher education programs. It is recognized that this parameter limited participation from many colleges and universities, especially independent and church-related institutions. A cursory review of Appendix A—Colleges and Universities with Vocational Teacher Education Programs—indicates that many traditional programs, especially in business education and home economics education, are offered in church-related, independent schools. Sometimes, only one traditional vocational program is offered at a particular college or university. It is recommended that these programs be studied relative to the major tenets of the teacher education reform movement, the programs' curriculum anatomy, admission and exit requirements, enrollment trends, professorial demographics, and so forth.

It is also recognized that much vocational teacher education takes place out of the traditional realm of college or university study. Perhaps as many as seventy-three percent of trade and industrial education beginning teachers and fifty percent of health occupations beginning teachers do not receive preservice teacher education from a college or university; rather, they receive their teacher education from state-sponsored inservice education or from the employing agency (i.e., the school system) itself (Lynch & Griggs, 1989). Thus, much of preservice vocational teacher education is not university-based. And, of course,

even some university-based preservice teacher education (as found in this study) is designed to meet state certification minimal course requirements; this is in contrast with planned, cohesive, and typically accredited programs of study leading toward a baccalaureate degree in education. These nontraditional forms of vocational teacher education also need to be studied relative to the major tenets of teacher education reform.

From the findings of this study, it can be concluded that a relatively small number of U.S. colleges and universities are committed to preparing teachers for vocational education programs. Only four hundred and thirty-two of the twelve hundred colleges and universities—private and public—offering teacher education have at least one traditional vocational teacher education program. About one hundred colleges and universities—approximately eight percent of the total providing teacher education—offer four or more programs. They do so with various delivery models and probably for a comparatively (i.e., with other areas of teacher education) small enrollment. Thus, a national comprehensive design and consistent delivery of vocational teacher education has yet to be realized. This hopefully will be a subject for future research and action as national and state policymakers continue to suggest or mandate overhaul in national and state vocational education delivery systems. Where and how, for example, will the teachers be prepared to meet the reform agenda for improving secondary vocational education as suggested through the National Assessment of Vocational Education? Where and how will the teachers be prepared to meet the national commitment to vocational and technical training through postsecondary and adult education, as anticipated through the proposed, amended federal Carl D. Perkins Vocational Education Act? Should vocational teacher education continue to be concentrated primarily at a relatively few public universities?

The colleges and universities that are preparing vocational education teachers are relatively large public institutions, often land-grant by historical tradition. The dominant administrative structure is to place all vocational teacher education programs in a comprehensive vocational education department in a college or school of education. Although beyond the scope of this study, it would be helpful information to know if the organizational structure of the program(s) has any correlation with the number of full-time faculty, faculty demographics and teaching loads, student census, curriculum and instructional changes emanating through reform efforts, and so forth.

Completers (graduates) of preservice vocational teacher education declined overall from 1987 through 1989. The underpinnings of this decline need to be analyzed further, especially since enrollments in teacher education programs nationally (i.e., in elementary and secondary education) are enjoying a general upswing. Is the decline in enrollment in vocational teacher education continuing? Is there a relationship between student census and administrative structure for the program? It is noted that respondents in this study reported especially steep declines in agricultural education and home economics education. Could the declines possibly be related to the tendency for these two programs not to be directly administered with a College of Education?

The Vocational Teacher Education Professoriate

Contrary to some reports and speculation in the literature, the faculty in vocational teacher education are relatively stable, well educated, and occupationally experienced. Further, the vocational teacher educator tends to profile favorably and relatively similarly with a profile gleaned from findings about secondary education professors (AACTE, 1987). A few examples: seventy-five percent of secondary education faculty are tenured compared to sixty-eight percent of vocational teacher educators; ninety-three percent of secondary professors are Caucasian, compared with ninety-one percent of vocational education faculty; the average age for secondary professors is fifty-three compared with forty-nine for vocational education; and forty-five percent of secondary methods instructors are full professors compared to thirty-eight percent of vocational teacher educators. A larger percentage of vocational teacher educators have doctoral degrees than do their secondary methods counterparts. Virtually all teacher educators have considerable teaching experience and nearly all vocational teacher educators have occupational experience.

There does not appear to be planned massive retirement nor exodus from the profession in the near future. Fully seventy-one percent of vocational teacher educators plan to remain at their present institution for at least the next five years. About eleven percent plan to retire within five years; most of the others plan to move into higher education administration or seek a position at another college or university.

It was interesting to note that faculty responses from both this and the AACTE study indicate that faculty teach more than they believe their institutions desire and more

than they think is ideal. Faculty in the AACTE survey spent even more of their time in teaching-related activities than did vocational teacher educators responding to this study. The ideal/desired by institution/actual time spent triad of research, teaching, and scholarship warrants further study for education professors, perhaps as contrasted with arts and science faculty, subject matter faculty, and others and as expected and practiced in various types of colleges and universities. Interesting, too, is the fact that nearly fifty percent of faculty in vocational teacher education teach not only pedagogy, but in their subject area as well.

The low numbers of Blacks (5.5%) and other minorities (total of 3.5%) in the vocational teacher education ranks is alarming. The number of Hispanics is negligible. Much has been written recently about the need to recruit minorities into teaching; this study (and that of the AACTE) makes it quite clear that recruiting and related support activities also must occur to attract and nurture minorities into teacher education. It is encouraging that twelve percent of the vocational education assistant professors are Black; however, the actual number (seventeen) is relatively small.

Finally, with respect to professors of vocational education, it is hoped that subsequent research will seek answers to questions raised through the findings of this study related to the interactive effects of gender, salary, rank, race, program area, administrative structure, and type of institution.

Vocational Teacher Education Curriculum and Instruction Within a Context of Educational Reform

How have major national education reform movements and the related demand for massive overhaul in the preparation of beginning teachers affected vocational teacher education? Neither the design of this study nor the findings permit cause and effect relationships; that is, it cannot be determined whether the major tenets undergirding reform in teacher education generally have affected vocational teacher education specifically. However, a few observations can be gleaned from the recent literature and this study.

Most of the national policy reports or mandates regarding teacher education essentially called for reform in curriculum (e.g., in increased liberal arts and/or subject matter) and reform in program structure or delivery systems (e.g., from baccalaureate

preparation to postbaccalaureate preparation). At the macro or national level, nearly all vocational teacher education programs are primarily delivered through a baccalaureate degree delivery model. Only six of the seventy-eight universities have eliminated baccalaureate-level preparation in any (but interestingly, not all) of their vocational teacher education programs. Actually, findings verify that vocational teacher education tends to be delivered through a variety of models, including nondegree programs and certification courses for those who do not currently have nor plan to acquire a baccalaureate degree prior to teaching. The delivery models that are used to prepare vocational education teachers are tailored to the educational background and occupational experiences of the prospective teacher. Several delivery options are available at each institution.

It is not possible to determine the extent to which curriculum parameters for vocational teacher education programs have changed as a result of reform efforts. However, anecdotal evidence and some data from this study's institutional and professors' surveys would indicate that macro, significant changes have not been made. Within the primary model of offering a baccalaureate degree in a vocational education program area, the typical vocational teacher preparation curriculum consists of one hundred and twenty-eight semester credits; forty-seven in general studies, forty-three in subject matter, fourteen in methods courses, fourteen in educational foundations, and ten in student teaching. According to AACTE data (1987), secondary education majors complete one hundred and thirty-five semester credits as follows: fifty-two in general studies, thirty-nine in an academic major, eighteen in an academic minor, seven in methods courses, nine in educational foundations, and ten in student teaching. Thus, it seems as though vocational teacher education majors take fewer overall credits, fewer in general studies, and fewer in subject matter than secondary education majors. Vocational education majors tend to take more credits in methods courses and education foundations. However, it is noted that there are differences in curriculum parameters among the vocational education programs.

Finally, the greatest change in vocational teacher education in the past few years—at least at the macro or national level—has probably been to stiffen requirements into teacher education. Grade point averages have been increased (to a 2.50), a minimum score is often required on a basic skills test, and other requirements have been imposed to monitor the "quality" of those who might become teachers. A second possible change at the macro level may have been to increase the credit hours and time devoted to student teaching or other clinical-type experiences with the public schools.

REFERENCES

Asburn, E., Mann, M., Barrett, J., & Schneiderman, B. (1988). Teacher educators: What do we know? *Action in Teacher Education, 10*(3), 62-64.

American Association of Colleges for Teacher Education. (1985). *Research about teacher education (RATE).* Washington, DC: Author.

American Association of Colleges for Teacher Education. (1987). *Teaching teachers: Facts & figures* (Research About Teacher Education Project). Washington, DC: Author.

Ashton-Tate. (1987). *dBaseIII Plus* [Computer Software]. Torrence, CA: Author.

Carnegie Forum on Education and the Economy. (1986). *A nation prepared: Teachers for the 21st century.* New York, NY: Carnegie Corporation.

Center for Education Statistics. (1988). *Schools and staffing survey.* Washington, DC: U.S. Department of Education.

Darling-Hammond, L., & Berry, B. (1988). *The evolution of teacher policy.* Washington, DC: RAND Corporation.

Goodlad, J. (1990). *Teachers for our nation's schools.* San Francisco, CA: Jossey-Bass.

Holmes Group, Inc. (1986). *Tomorrow's teachers: A report of the Holmes Group.* East Lansing, MI: Author.

Kluender, M. M. (1984). Teacher education programs in the 1980s: Some selected characteristics. *Journal of Teacher Education, 35*(4), 33-35.

Lanier, J. L., & Little, J. W. (1986). Research on teacher education. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed.) (pp. 527-569). New York, NY: MacMillan.

Lynch, R. L. (1988). Vocational teacher education: A research agenda. In M. B. Griggs, R. Jones, & A. Slocum (Eds.), *Vocational teacher education and the Holmes*

Group (pp. 94-111). Urbana-Champaign: University of Illinois, Department of Vocational and Technical Education.

Lynch, R. L., & Griggs, M. B. (1989). *Vocational teacher education: A context for the future*. Berkeley: National Center for Research in Vocational Education, University of California at Berkeley.

Sandefur, J. T. (1986). State assessment trends. *AACTE Briefs*, *7*(6), 12-14.

Troyer, M. (1986). A synthesis of research on the characteristics of teacher educators. *Journal of Teacher Education*, *37*(5), 6-11.

Yarger, S. J. (1989). Research about teacher education (RATE): Introduction to an ongoing study. *Journal of Teacher Education*, *39*(4), 33-35.

APPENDIX A

COLLEGES AND UNIVERSITIES WITH VOCATIONAL TEACHER EDUCATION PROGRAMS

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
ALABAMA								
Alabama A&M	x	x		x			x	x
Alabama State University		x						
Auburn University	x	x	x	x	x	x		x
Jacksonville State University				x				
Livingston University					x			
Oakwood College		x		x				
Samford University				x				
Tuskegee University	x			x				x
University of Alabama, Birmingham		x	x					
University of Alabama, Tuscaloosa				x				
University of Montevallo				x				
University of North Alabama		x		x				
ALASKA								
Alaska Pacific University			x					
University of Alaska	x							
ARIZONA								
Arizona State University		x		x	x		x	x
Northern Arizona University							x	x
University of Arizona	x	x		x		x		
ARKANSAS								
Arkansas State University		x						
Arkansas Tech University		x						
Harding University				x				
Henderson State University		x		x				
John Brown University		x						

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
Ouachita Baptist University				x				
Southern Arkansas University		x						
University of Arkansas, Fayetteville	x	x		x		x	x	x
University of Arkansas, Little Rock		x						
University of Arkansas, Pine Bluff	x			x			x	x
University of Arkansas State University	x							
University of Central Arkansas		x		x	x		x	
CALIFORNIA								
California Polytechnic State University, San Luis Obispo	x			x			x	
California State Polytechnic University, Pomona	x	x		x	x			
California State University, Chico	x			x			x	
California State University, Fresno	x	x		x			x	x
California State University, Long Beach				x		x	x	
California State University, Los Angeles		x		x			x	x
California State University, Northridge		x		x		x		
California State University, Sacramento		x		x				
Christian Heritage College				x				
Humboldt State University		x		x			x	
Loma Linda State University		x						
Pacific Union College				x			x	
Point Loma Nazarene College				x				
San Diego State University		x		x			x	

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
San Francisco State University		x		x	x	x	x	x
San Jose State University							x	
University of California, Davis	x		x	x				
University of California, Los Angeles		x						
Whittier College				x				
COLORADO								
Adams State College		x					x	
Colorado State University	x	x	x	x	x	x	x	x
Metropolitan State College		x					x	
University of Southern Colorado							x	
Western State College				x				
CONNECTICUT								
Central Connecticut State University		x	x		x	x	x	x
St. Joseph College				x				
University of Connecticut	x			x				
Central Connecticut State University			x			x		
DELAWARE								
Delaware State College	x			x		x	x	x
University of Delaware	x	x		x		x		
DISTRICT OF COLUMBIA								
The George Washington University						x		
FLORIDA								
Bethune-Cookman College		x						
Florida A&M University	x					x	x	x
Florida International University			x	x			x	x
Florida State University				x				
University of Central Florida			x			x		x

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
University of Florida	x					x		
University of North Florida								x
University of South Florida		x	x		x	x		x
University of West Florida		x		x	x	x	x	x
GEORGIA								
Albany State College		x						
Berry College				x				x
Fort Valley State College		x		x				
Georgia College		x		x				
Georgia Southern College				x		x	x	x
Georgia State University		x	x		x	x		x
Savannah State College							x	x
University of Georgia	x	x	x	x	x	x	x	x
Valdosta State College		x						x
West Georgia College		x						
GUAM								
Guam Community College						x		
HAWAII								
Brigham Young University								x
University of Hawaii			x	x	x	x	x	x
IDAHO								
Boise State University		x						
Idaho State University				x	x			x
Northwest Nazarene College		x		x				
University of Idaho	x	x		x		x	x	x
ILLINOIS								
Bradley University				x				
Chicago State University		x					x	
Eastern Illinois University		x		x	x		x	

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
Illinois State University	x	x		x	x		x	
Northern Illinois University		x		x	x			
Olivet Nazarene College				x				
Southern Illinois University, Carbondale	x	x	x	x	x	x	x	x
Southern Illinois University, Edwardsville		x			x			
University of Illinois, Champaign-Urbana	x			x	x	x	x	x
Western Illinois University	x	x		x	x	x	x	
INDIANA								
Ball State University		x		x	x		x	x
Butler University		x		x				
Goshen College				x				
Indiana State University		x		x	x		x	x
Indiana University		x	x					
Manchester College				x				
Marian College				x				
Purdue University	x			x		x	x	x
University of Southern Indiana		x						
IOWA								
Iowa State University	x			x		x	x	x
University of Iowa			x	x				
University of Northern Iowa		x		x		x	x	x
Wartburg College		x						
Westmar College							x	
William Penn College							x	
KANSAS								
Bethel College				x			x	
Emporia State University		x		x	x		x	
Fort Hays State University		x		x			x	

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
Friends University		x						
Kansas State University	x			x		x		
McPherson College				x			x	
Pittsburg State University				x			x	x
University of Kansas							x	
Wichita State University		x						x
KENTUCKY								
Berea College				x			x	
Eastern Kentucky University		x		x			x	x
Georgetown College				x				
Kentucky State University		x		x			x	
Morehead State University	x	x		x			x	x
Murray State University	x	x		x	x	x	x	x
Northern Kentucky		x						x
University of Kentucky	x	x		x	x	x		
University of Louisville		x	x		x	x		x
Western Kentucky University	x	x	x	x	x	x	x	
LOUISIANA								
Grambling State University		x		x			x	
Louisiana State University	x	x		x		x	x	x
Louisiana Tech University	x	x		x				
McNeese State University				x		x		
Nicholls State University		x		x	x			
Northeast Louisiana University		x		x				
Northwestern State University of Louisiana		x		x	x			x
Southeastern Louisiana University		x		x				x
Southern University, New Orleans	x	x		x		x		

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
University of Southwestern Louisiana	x	x		x			x	
MAINE								
Husson College		x						
University of Maine, Farmington				x				
University of Maine, Orono	x			x				
University of Southern Maine						x	x	x
MARYLAND								
Hood College				x				
Morgan State University				x				
University of Maryland, College Park	x	x		x	x	x	x	x
University of Maryland, Princess Anne	x			x				x
MASSACHUSETTS								
Fitchburg State College							x	x
Framingham State College				x				
Salem State College		x						
Suffolk University		x						
University of Massachusetts	x			x				
Westfield State College						x		
MICHIGAN								
Adrian College				x				
Andrews University				x			x	
Central Michigan University		x		x	x	x	x	x
Eastern Michigan University		x		x	x	x	x	
Ferris State University		x	x		x			x
Madonna College				x				
Marygrove College				x				
Michigan State University	x	x		x	x			x
Northern Michigan University		x		x			x	x

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
Wayne State University		x		x		x		
Western Michigan University		x		x	x		x	x
MINNESOTA								
Bemidji State University		x				x	x	x
College of St. Catherine				x				
College of St. Scholastica				x				
Concordia College				x				
Gustavus Adolphus College		x						
Mankato State University		x		x			x	
Moorhead State University		x					x	x
St. Cloud State University		x			x	x	x	
Southwest State University		x						
University of Minnesota, Duluth				x				x
University of Minnesota, St. Paul	x	x		x	x	x		x
Winona State University		x						
MISSISSIPPI								
Alcorn State University	x			x			x	x
Delta State University		x		x				
Jackson State University		x					x	
Mississippi College		x		x				
Mississippi State University	x	x		x	x	x	x	x
Mississippi University for Women				x				
Mississippi Valley State University								x
Rust College		x						
University of Mississippi				x				
University of Southern Mississippi		x		x				x

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
MISSOURI								
Central Missouri State University				x	x		x	
Fontbonne College				x				
Lincoln University		x		x			x	x
Mineral Area College						x		
Missouri Southern State College		x					x	
Missouri Western State College		x						
Northeast Missouri State University		x		x			x	
Northwest Missouri State University	x	x		x			x	
Schools of the Ozarks		x						
Southeast Missouri State		x		x			x	
Southwest Missouri State		x		x			x	
The School of the Ozarks				x			x	
University of Missouri	x	x	x	x	x	x	x	x
William Woods College				x				
MONTANA								
Eastern Montana College						x		
Montana State University	x			x		x	x	x
Northern Montana College							x	x
Northern Montana University		x						
University of Montana		x		x			x	
Western Montana College		x					x	
NEBRASKA								
Chadron State College		x		x		x	x	
Kearney State College				x		x	x	x
Nebraska Western College						x		
Peru State College							x	
Union College		x						

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
University of Nebraska, Lincoln	x	x	x	x	x	x	x	x
University of Nebraska, Omaha		x				x		
Wayne State College		x		x		x	x	x
NEVADA								
University of Nevada	x			x		x		x
NEW HAMPSHIRE								
Keene State College							x	x
New Hampshire College		x			x			
Plymouth State College/University of New Hampshire System		x						
Rivier College				x				
University of New Hampshire	x			x				
NEW JERSEY								
College of Saint Elizabeth				x				
Cook College-Rutgers	x			x		x		
Glassboro State College				x		x	x	
Jersey City State College						x		
Kean College of New Jersey							x	
Montclair State College		x		x	x		x	x
Rider College		x			x			
Rutgers University		x				x		x
Trenton State College		x			x	x	x	x
NEW MEXICO								
Eastern New Mexico University		x		x	x		x	
New Mexico Highlands University							x	
New Mexico State University	x			x		x		
University of New Mexico		x		x	x		x	x
Western New Mexico University				x				

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
NEW YORK								
Bernard M. Baruch College		x						
Concordia College		x						
Cornell University	x			x				
Herbert H. Lehman College		x						
Marymount College				x				
Nazareth College of Rochester		x			x			
New York Institute of Technology			x					
New York University		x		x	x		x	
Pace University		x						
State University College, Buffalo		x		x	x	x	x	x
State University College, Oneonta		x		x				
State University College, Oswego		x					x	x
State University College, Plattsburg				x				
State University of New York, Buffalo								
Syracuse University				x				
The City University of New York							x	x
Queens College of the City of New York				x				
NORTH CAROLINA								
Appalachian State University		x		x	x		x	
Bennett College				x				
Campbell University				x				
East Carolina University		x		x	x		x	
Elizabeth State University							x	
Fayetteville State University		x			x			
Mars Hill College				x				

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
North Carolina A & T University	x	x		x			x	x
North Carolina Central University				x				
North Carolina State University	x		x		x	x	x	x
Saint Augustine's College		x						
University of North Carolina, Greensboro		x		x	x			
Western Carolina University		x		x			x	x
Winston-Salem State University		x						
NORTH DAKOTA								
Dickinson State College		x						
Mayville State College		x						
Minot State College		x						
North Dakota State School of Science								x
North Dakota State University	x			x				
University of North Dakota		x		x	x	x	x	
Valley City State College		x					x	
OHIO								
Ashland College				x				
Bowling Green State University		x		x	x		x	x
Central State University							x	
Cleveland State University		x						
College of Mount St. Joseph				x				
Defiance College		x						
Kent State University	x	x		x	x	x	x	x
Miami University				x				
Ohio Northern University							x	
Ohio State University	x	x		x	x	x	x	x
Ohio University				x			x	

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
Rio Grande College		x						
University of Akron				x				x
University of Dayton		x		x				
University of Toledo		x						x
Wilmington College							x	
Wright State University		x						
Youngstown State University				x				
OKLAHOMA								
Cameron University	x			x				
Central State University		x	x	x	x		x	x
East Central University		x		x			x	
Langston University				x			x	
Northeastern State University		x		x			x	
Northwestern Oklahoma State University		x		x			x	
Oklahoma State University	x	x		x	x	x	x	x
Panhandle State University	x	x		x			x	
Southeastern Oklahoma State University		x		x			x	
Southwestern Oklahoma State University		x		x			x	
University of Science and Arts of Oklahoma		x		x				
OREGON								
Eastern Oregon State College		x						
George Fox College				x				
Linfield College				x				
Oregon State University	x	x		x	x	x	x	x
Portland State University		x						
Southern Oregon State College		x			x			

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
PENNSYLVANIA								
Albright College				x				
Bloomsburg University		x				x		
California University of Pennsylvania							x	
Cheyney University of Pennsylvania				x			x	
Drexel University				x				
Grove City College		x						
Immaculata College				x				
Indiana University of Pennsylvania		x		x	x	x		x
Mansfield University of Pennsylvania				x				
Marywood College		x		x		x		
Mercyhurst College				x				
Messiah College				x				
Millersville University							x	
Pennsylvania State University	x		x	x		x		x
Robert Morris College		x						
Seton Hill College				x				
Shippensburg University		x						
Temple University		x			x	x		x
University of Pittsburgh		x			x			x
Villa Maria College				x				
York College of Pennsylvania		x						
PUERTO RICO								
University of Puerto Rico	x	x					x	x
RHODE ISLAND								
Johnson & Wales College		x						
Rhode Island College						x	x	x

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
University of Rhode Island	x	x		x				
SOUTH CAROLINA								
Bob Jones University				x				
Clemson University	x					x	x	x
Lander College		x		x				
South Carolina State College				x			x	x
University of South Carolina		x						
Winthrop College				x	x			
SOUTH DAKOTA								
Black Hills State College		x					x	
Dakota State University		x	x					
Northern State College		x			x		x	
South Dakota State University	x			x				
University of South Dakota						x		
TENNESSEE								
Austin Peay State University		x						
Carson-Newman College				x				
Columbia State Community College			x					
East Tennessee State University		x		x	x		x	
Memphis State University		x		x	x	x	x	x
Middle Tennessee State University		x		x	x	x	x	x
Tennessee State University		x		x			x	x
Tennessee Technological University				x			x	x
University of Tennessee, Knoxville	x	x	x	x	x	x	x	x
University of Tennessee, Martin	x			x				

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
University of Tennessee, Memphis			x					
Middle Tennessee State University	x							
Tennessee State University	x							
TEXAS								
Abilene Christian University				x			x	
Baylor University		x		x				
East Texas State University	x	x		x		x	x	x
Incarnate Word College				x				
Jarvis Christian College		x						
Lamar University		x		x				
North Texas State University				x	x	x		
Our Lady of the Lake University		x						
Pan American University		x						
Prairie View A&M University	x	x		x			x	
Sam Houston State University	x	x		x			x	
Southwest Texas State University	x	x		x	x		x	x
Stephen F. Austin State University	x	x		x				
Sul Ross State University		x					x	
Tarleton State University	x			x			x	
Texas A&I University	x			x			x	
Texas A & M University	x					x	x	x
Texas Christian University				x				
Texas Southern University				x			x	
Texas Tech University	x	x		x				
Texas Wesleyan College		x						
Texas Woman's University		x		x		x		
University of Houston		x		x	x			x

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
University of Mary Hardin Baylor				x				
University of North Texas		x					x	
University of Texas, Austin				x		x		
University of Texas, Tyler							x	x
West Texas State University		x						
UTAH								
Brigham Young University				x			x	
Southern Utah State College		x		x			x	
University of Utah				x				
Utah State University	x	x		x	x	x	x	x
Weber State College		x						
VERMONT								
Castleton State College		x			x			
University of Vermont	x			x		x	x	x
VIRGINIA								
Bridgewater College				x				
George Mason University							x	x
Hampton University				x				
James Madison University		x		x	x		x	x
Longwood College		x						
Norfolk State University		x		x			x	x
Old Dominion University					x	x	x	
Radford University		x		x				
St. Paul's College		x						
Virginia Commonwealth University			x		x			x
Virginia Polytechnic Institute and State University	x	x	x	x	x	x	x	x
Virginia State University	x	x		x			x	x

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
WASHINGTON								
Central Washington University		x		x	x		x	x
Eastern Washington University		x		x	x	x	x	
Seattle Pacific University				x				
University of Washington						x		
Walla Walla College							x	
Washington State University	x			x		x		x
Western Washington University		x		x			x	
WEST VIRGINIA								
Concord College		x						
Davis and Elkins College		x						
Fairmont State College		x		x			x	
Marshall University		x		x	x			
Shepherd College				x				
West Liberty State College				x				
West Virginia College of Graduate Studies						x		
West Virginia Institute of Technology			x				x	x
West Virginia University	x			x			x	
West Virginia Wesleyan College				x				
WISCONSIN								
Mount Mary College		x		x				
Silver Lake College				x				
University of Wisconsin, Eau Claire		x						
University of Wisconsin, Madison	x			x	x	x		
University of Wisconsin, Platteville	x						x	

APPENDIX A
(continued)

STATE/INSTITUTION	AG ED	BUS ED	HLTH ED	HOME EC	MKTG ED	SPCL NEEDS	TECH ED	T&I
University of Wisconsin, River Falls	x						x	
University of Wisconsin, Stevens Point				x				
University of Wisconsin, Stout				x	x	x	x	x
University of Wisconsin, Whitewater		x			x	x		
WYOMING								
University of Wyoming	x	x	x	x	x	x	x	x
Total U.S. Colleges & Universities with Vocational Teacher Education Programs	**90**	**237**	**31**	**267**	**89**	**99**	**178**	**120**

Note: This appendix was created from information contained in seven separate directories of vocational teacher education in programs. The colleges and universities in bold print comprise the population for this study.

APPENDIX B

RESPONSE TO SURVEYS FROM COLLEGES AND UNIVERSITIES AND VOCATIONAL EDUCATION FACULTY

College or University	Institutional Response Returned		No. of Faculty Responses With Teacher Education Responsibilities	
	Yes	No	Yes	No
Alabama A&M		x		
Auburn University	x		11	1
Arizona State University	x		5	6
University of Arizona	x		7	
University of Arkansas, Fayetteville	x		13	
University of Arkansas, Pine Bluff	x		2	1
University of Central Arkansas	x		7	9
California State Polytechnic University, Pomona		x*		
California State University, Fresno		x**		
California State University, Los Angeles		x*		
San Francisco State University		x		
Colorado State University		x		
Central Connecticut State University	x		8	3
Delaware State College	x		4	
University of Delaware	x		3	
Florida A&M University		x		
Florida International University	x		7	1
University of South Florida	x		6	

APPENDIX B
(continued)

College or University	Institutional Response Returned		No. of Faculty Responses With Teacher Education Responsibilities	
	Yes	No	Yes	No
University of West Florida	x		4	
Georgia Southern College	x		4	
Georgia State University		x		
University of Georgia	x		13	
University of Hawaii	x		7	
University of Idaho	x		14	
Eastern Illinois University	x		16	3
Illinois State University	x		11	1
Southern Illinois University, Carbondale	x		26	3
University of Illinois, Champaign-Urbana	x		6	1
Western Illinois University		x		
Ball State University	x		6	3
Indiana State University	x		13	2
Purdue University	x		9	3
Iowa State University	x		13	12
University of Northern Iowa		x*		
Emporia State University		x**		
Eastern Kentucky University	x		4	
Morehead State University	x		6	
Murray State University	x		3	
University of Kentucky	x		7	

APPENDIX B
(continued)

College or University	Institutional Response Returned		No. of Faculty Responses With Teacher Education Responsibilities	
	Yes	No	Yes	No
University of Louisville	x		2	
Western Kentucky University		x		
Louisiana State University	x		7	2
Northwestern State University of Louisiana		x		
Southern University, New Orleans		x**		
University of Southwestern Louisiana		x		
University of Maryland College Park	x		8	
Central Michigan University	x		3	
Eastern Michigan University	x		11	
Ferris State University	x		7	
Michigan State University		x***		
Northern Michigan University		x		
Western Michigan University		x**		
Bemidji State University	x		7	
St. Cloud State University		x**		
University of Minnesota, St. Paul	x		15	3
Alcorn State University	x		5	
Mississippi State University	x		14	2
Lincoln University		x		

APPENDIX B
(continued)

College or University	Institutional Response Returned		No. of Faculty Responses With Teacher Education Responsibilities	
	Yes	No	Yes	No
Northwest Missouri State University	x		6	
University of Missouri	x		14	
Montana State University		x		
Chadron state College	x		5	3
Kearney State College	x		8	4
University of Nebraska, Lincoln		x		
Wayne State College		x		
University of Nevada		x**		
Montclair State College		x**		
Trenton State College	x		4	5
Eastern New Mexico University		x		
University of New Mexico		x		
New York University		x**		
State University College, Buffalo		x		
Appalachian State University	x		8	1
East Carolina University	x		9	2
North Carolina A&T University	x		6	
North Carolina State University	x		14	
Western Carolina University	x		4	

APPENDIX B
(continued)

College or University	Institutional Response Returned		No. of Faculty Responses With Teacher Education Responsibilities	
	Yes	No	Yes	No
University of North Dakota	x		10	
Bowling Green State University	x		7	4
Kent State University		x		
Ohio State University	x		25	4
Central State University	x		8	
Oklahoma State University	x		9	3
Panhandle State University	x		3	
Oregon State University	x		11	
Indiana University of Pennsylvania		x		
Temple University	x		12	5
The Pennsylvania State University	x		8	
Clemson University	x		8	
East Tennessee State University	x		5	
Memphis State University	x		3	1
Middle Tennessee State University	x		5	1
Tennessee State University		x**		
University of Tennessee	x		13	2
East Texas State University		x**		
Prairie View A&M University	x		6	2

APPENDIX B
(continued)

College or University	Institutional Response Returned		No. of Faculty Responses With Teacher Education Responsibilities	
	Yes	No	Yes	No
Sam Houston State University	x		7	2
Southwest Texas State University	x		6	
Texas A&M University	x		12	
University of Houston	x		4	1
Utah State University	x		13	2
University of Vermont	x		3	2
James Madison University	x		7	3
Norfolk State University	x		8	3
Virginia Polytechnic Institute and State University	x		17	
Virginia State University		x		
Central Washington University	x		3	
Eastern Washington University	x		5	
Washington State University	x		5	
University of Wisconsin, Madison	x		4	3
University of Wisconsin, Stout	x		10	1
University of Wyoming	x		4	
TOTAL	78	34	633	742

*Institution not surveyed.
**Institution does not offer any vocational teacher education programs; or institutions for college or university has had so very few graduates/completers in recent years that administrators preferred not to participate in study.
***Vocational teacher education programs are being phased out; possibly some teacher education remaining in Colleges of Agriculture and/or Human Ecology.